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LUDWIG LACHMANN – ENIGMATIC AND CONTROVERSIAL AUSTRIAN ECONOMIST

*This month's Liberty Matters discusses the work of the Austrian economist **Ludwig M. Lachmann** (1906 - 1990). All his whole professional life Lachmann considered himself an "Austrian" economist, a soldier dedicated to fostering an appreciation of Austrian insights and to developing those insights beyond the initial contributions of **Carl Menger**. So Lachmann saw it as his mission to advance among the Austrians a heightened appreciation of the importance of the subjective and autonomous nature of expectations. Lachmann's most significant contribution to economic theory was to the theory of capital. These contributions can be found in numerous articles in the 1940s, during the LSE period, culminating in his book Capital and its Structure (1956), and in various articles subsequently right up until his death, and also in his final full length work, The Market as an Economic Process (1986). Lachmann's capital theory is a logical outgrowth of his methodological and epistemological views. In other words, it reflects his thoroughgoing subjectivism. The topic is introduced by Peter Lewin, Clinical Professor in the Jindal School of Management, University of Texas, Dallas, and is joined in the discussion by Hans Eicholz, Senior Fellow at Liberty Fund; Paul Lewis, Reader in Economics and Public Policy at King's College London; Mario J. Rizzo, professor of economics at NYU, and Bill Tulloh is a cofounder and economist at Agoric.*

LUDWIG LACHMANN – ENIGMATIC AND CONTROVERSIAL AUSTRIAN ECONOMIST

by Peter Lewin

Introduction: Themes in Lachmann's Work

All his whole professional life Ludwig M. Lachmann considered himself an "Austrian" economist, a soldier dedicated to fostering an appreciation of Austrian insights and to developing those insights beyond the initial contributions of Carl Menger (Lachmann 1978). He believed the Austrians had stalled in the development of the implications of subjectivism. Menger (the most insightful and subjectivist of the marginal revolutionaries) had seen the inescapable subjectivism of *value*. Hayek had said some insightful things about *knowledge*. Böhm-Bawerk offered important insights into the nature of *capital* and the role of time, but took a disastrous wrong turn toward classical (pre-marginal) Ricardianism -- value is determined by the cost of production. Mises, he thought, had methodological problems around the connection between knowledge and expectations. Kirzner envisaged entrepreneurial actions as inevitably equilibrating. So Lachmann saw it as his mission to advance among the Austrians a heightened appreciation of the importance of the subjective and autonomous nature of expectations. Most of what he did can be understood within this context. Indeed it is difficult to understand Lachmann without understanding the context.

Lachmann the "Austrian economist" was not "born" to it. He was German, not Austrian. He studied with Werner Sombart for his Ph.D. in Berlin. It is not clear what aspects of Sombart's influence, if any, can be found in Lachmann's work. The Sombart connection remains an intriguing mystery for Lachmann scholars. But at this time he was also studying Max Weber, whose influence is unmistakable.

Max Weber

Lachmann appears to have become interested in Austrian economics during the 1920s while still in Germany. He met Mises very briefly in Berlin in 1932, when Mises was there for a conference. Lachmann knew who he was and made a point of meeting him. In 1933 Lachmann arrived in England and decided to pursue a second graduate degree at the London School of Economics (LSE). This placed him within the vibrant new "Hayekian" school of economics, together with such scholars as Lionel Robbins, John Hicks, Nicholas Kaldor, Abba Lerner, George Shackle, and others, and at the very center of the fast-developing battle between the Hayekians and the emerging Keynesians. He was already a "Hayekian" when he arrived (Mittermaier 1992: 9). As Mittermaier points out, being a "Hayekian" at that time referred to an appreciative interest in the Austrian theory of capital and the business (trade) cycle.

Later, after he had moved to South Africa, he explored the connections between the Austrians and Max Weber – a difficult project seeing that Weber was identified as a younger member of the German Historical School – Menger's old enemies. But Lachmann was convinced that there were more commonalities than differences – especially in the conception of human plans and actions. The "German dimension" of Lachmann's thinking was something that no doubt motivated him throughout, including during his Hayekian period at the LSE, at which time it would have been lying dormant as it were.

So within the text of Lachmann's writing are these two motivations – to nudge the Austrians to take more account of the subjectivism of expectations (for example in avoiding the claim of [plan] equilibrium tendencies in markets) and to foster among his Austrian colleagues an appreciation of a "Weberian" approach. From the late 1950s, this developed into an uncompromising appreciation for the work of George Shackle in whom Lachmann saw the flowering of this Weberian seed. These two motivations are related. This is perhaps seen no more clearly than in his 1976 *Journal of Economic Literature* article, "From Mises to Shackle," in which he connects the work of Weber, Mises, and Shackle – something that one suspects Mises (though he respected Weber) might have found not particularly congenial.

One may also wonder what other audiences Lachmann had in mind in his writing. Another persistent theme is his disenchantment with "mainstream" economics – "late classical formalism." He passionately bemoaned the path that economics had taken, and much of his writing is firmly directed at that – presumably trying to reach some young minds in the profession who might, in time, be able to make a difference, since his Austrian colleagues hardly needed convincing on that score.

Phases of His Life

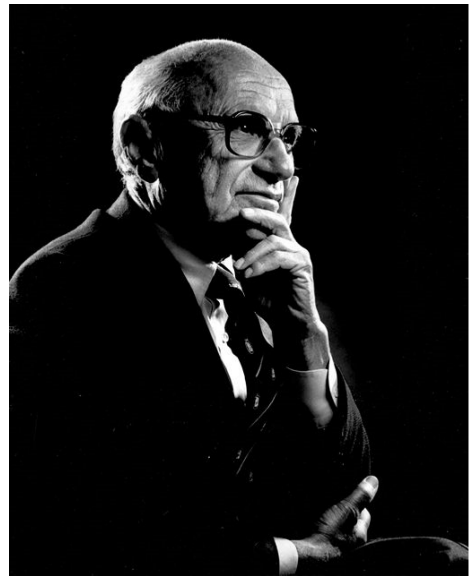
Some distinct phases can be perceived in Lachmann's life that correspond to aspects of this work. He was born and grew up in Germany, where he received his undergraduate and graduate education and where he produced some earlier work. This "German period" is the one we know least about. Bill Tulloh and Hans Eicholz are actively researching it. Observing the black clouds of war, Lachmann moved to the LSE where, as already mentioned, he was witness to a "pivotal moment" in the development of economics. Like many of his colleagues at the time, Lachmann was a "displaced person" with all that that implies, and his personal story is one of great difficulty and disruption during this period – the LSE period. Concerning the interesting work he produced during this time, not all that there is to be known is known. Some work is being done on this, and much more remains to be done.

After World War II, unable to find a satisfactory permanent position in England, he moved to South Africa, where he remained for the rest of his life. Until his retirement he was professor and head of the department of economics and economic history at the University of the Witwatersrand in Johannesburg. In the last few decades of his life he spent a semester each year in the United States teaching and conducting seminars and generally interacting with scholars and interested graduate students at New York University and George Mason University.

It was during this last period that his influence on modern Austrian economics was most apparent. And the importance of this contribution has only grown with time. From today's perspective looking back at the Austrian revival, there is no question that Lachmann's particular vision is an integral and indispensable part of that revival. One cannot imagine doing modern Austrian economics without a tacit or explicit adherence to the principles that Lachmann emphasized. While his views often appeared to be very controversial at the time, in retrospect, in my opinion, they appear much less so, and his differences with the leading thinkers in Austrian economics are of less practical importance than once might have been thought. This is a question that might motivate our upcoming discussion.

Methodology

For Austrians the subjectivism of value implies a process in which individuals with different subjective valuations interact in markets. The result is the formation of prices that guide individual production and consumption decisions. In neoclassical economics the subjectivism of value is dealt with, not by focusing on variation in individual valuations, but by focusing on the equilibrium that would arise if these interactions were allowed to play out indefinitely while the exogenous conditions remains fixed. The hypothetical equilibrium state, in which individual marginal valuations all coincide, is assumed to apply continuously. There is little or no discussion of disequilibrium behavior. It is actually a bit more complicated than this and depends very much on what one considers to be the parameters within which this equilibrium is assumed. However, as a practical matter, the two approaches resulted in very different methods of analysis.



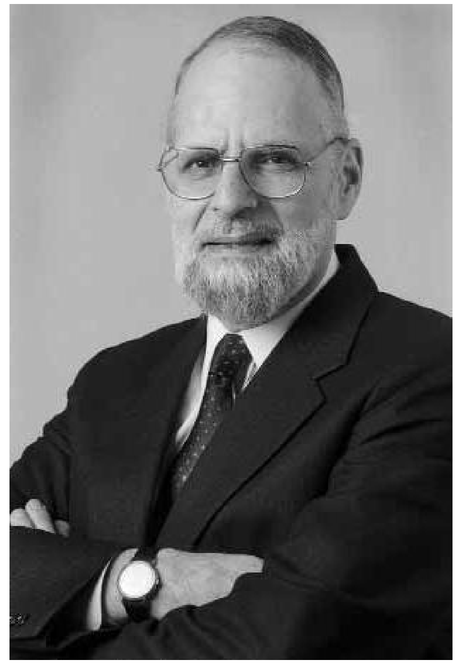
Milton Friedman

Neoclassical economics moved steadily toward a paradigm of what came, somewhat confusingly, to be called "positive" economics, along the lines of Milton Friedman's famous essay (1953). In crude terms it says that assumptions don't matter, only predictions do. And some neoclassical practitioners take this very seriously and produce all kinds of technical nonsense. As Lachmann pointed out, data has to be interpreted, and interpretation relies on notions of plausibility and comprehensibility – indeed, that the whole point of doing economics was to render the social world comprehensible. Clearly assumptions do matter a lot. But equally important, as Hayek pointed out, the "data" that matter for any individual action include expectations about the actions of other market participants that will influence the outcome of any individual action. Much of Lachmann's work involves the analysis of the "individual plan" in which the "subjectivism of expectations" features prominently.

While he acknowledged that both Mises and Hayek, and also Kirzner, understood the importance of expectations and included them in their analyses, Lachmann believed that they stopped short of a full analysis of the implications of "divergent expectations." The fact that expectations are about the unknowable future means there is no way they can be reconciled *ex ante* between individuals. Indeed, the driving force of the market process relies on the divergence of expectations, on the interaction between bulls and bears, optimists and pessimists, entrepreneurs with conflicting visions. Different types of markets exhibit different degrees of divergence in expectations. Asset markets are volatile because of the high degree of such divergence, while markets for standard food items are less so.

Lachmann might claim that he filled the gap that his contemporaries and predecessors left in failing to address the implications of divergent expectations. Did he?

In the period immediately after the revival of interest in Austrian economics (circa 1974), much effort was devoted to trying to spell out a more satisfactory way of doing economics, and much of it concerned the question of whether or not a "tendency toward equilibrium" could be assumed, with Israel Kirzner asserting it could and should, and Lachmann disputing this. It was a period of exploration resulting in certain pivotal contributions, starting with Israel Kirzner's *Competition and Entrepreneurship* (1973) and Edwin Dolan's volume the *Foundations of Austrian Economics* (1976) and culminating in *The Economics of Time and Ignorance* by Mario Rizzo and Gerald O'Driscoll, and Don Lavoie's masterful books *National Economic Planning, What is Left* and *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered*,all published in 1985, and numerous articles by these and others. Those culminating works of Rizzo and O'Driscoll and Lavoie evidence very clearly Lachmann's influence. Those three doyens of modern Austrian thinking could, in a justifiable sense, be seen as first generation Lachmannians, though clearly, they pushed his work significantly beyond what they learned from him. By the end of the period it would seem that some in the Austrian revival had moved significantly away from the Kirznerian side of the Lachmann-Kirzner divide. (See also Vaughn 1994.) Since then, Austrian contributions have less focused on methodological and more on substantive contributions.



Israel Kirzner

Equilibrium Tendencies and All That

Kirzner asked a simple question: if the existing price and quantity are not market-clearing, how does the market move toward equilibrium? Who makes this happen? And of course the answer is, anyone who sees an advantage in doing so, anyone who sees that the market price is likely too high or too low and acts accordingly, will move the market toward that market-clearing price. There is no guarantee that that market-clearing price is a fixed target. It may be changing. Yet as long as these entrepreneurial actions are successful in creating value for the actors, the price and quantity will move toward market-clearing.

Lachmann objected to Kirzner's treatment of entrepreneurship as implying that such a tendency towards equilibrium was inherent in entrepreneurial action. He noted that since perceptions of opportunities are necessarily subjective, these perceptions may turn out to be wrong. Perceptions of opportunities, based as they are on expectations, are diverse. Different entrepreneurs are likely to have different expectations about the same future. In fact, without such differences there would be no competitive economic process. It follows that if there are disparate expectations about the same future, then at most, only one can be correct. To be sure, expectations are part of extensive human plans, and plans may be judged successful or not by the planners depending upon whether they fall within a particular range of outcomes. So in that sense, more than one entrepreneur could carry out successful plans even if their expectations did not align completely. Yet, still, the occurrence of error is both inevitable and necessary. It is from market-made errors that social learning takes place.

> "PARIS DOES GET FED, *RELIABLY SO. BUT NOT INEVITABLY SO.*"

For Lachmann the emergence of order, in spite of the coexistence of both equilibrating and disequilibrating forces, is an empirical matter. Paris does get fed, *reliably so. But not inevitably so.* It seems that this is true for both Mises and Hayek, but in different ways. Hayek tackles it explicitly. It is more implicit in Mises. But what we Austrians in the post-revival period have realized and come to increasingly concentrate on are the institutional conditions that militate in favor of the miraculous extended order that Hayek talked so much about – the order that results in Paris getting fed. In the post-post-revival period, then, this has come to be part of the normal science of Austrian economics. For social learning to take place, the institutions, in the broadest sense, have to be right.

Institutions

As a Lachmannian, I have always thought that Hayek's conception of plan-equilibrium is not the kind of equilibrium toward which any tendency can be imagined. What does it mean to say that plans are rendered more compatible? -- especially when we live in a world of ceaseless competition and innovation. This is Lachmann's issue with both Hayek and Kirzner. Perhaps it should not be an issue. I have argued, most recently in the *Review of Austrian Economics*, that we don't need an equilibrium of plans, or strict plan-coordination (Lewin 1997, 2016). What we need is an institutional structure that can accommodate a huge diversity of incompatible plans based on alternative incompatible visions for commercially viable ventures. This means that most of these plans will fail, but the institutional structure is such that these failures are peacefully absorbed, like the defeats suffered by football teams when only one can be the ultimate victor. Institutions provide the rules of the game; these are known and predictable; and they *do* provide for the coordination of plans in the sense that our behavior is ordered and oriented to one another. It is because of this high level of predictability in the sphere of routines, norms, laws, etc. that we can live with and prosper from the lack of predictability in the innovative commercial sphere. This is a lesson, it seems to me, common to all of our respected Austrian forebears that should inform our practice as economists. Institutions are an integral and significant part of what we do.

Capital

Lachmann's most significant contribution to economic theory was to the theory of capital. These contributions can be found in numerous articles in the 1940s, during the LSE period, culminating in his book *Capital and its Structure* (1956 [1978]), and in various articles subsequently right up until his death, and also in his final full length work, *The Market as an Economic Process* (1986). Lachmann's capital theory is a logical outgrowth of his methodological and epistemological views. In other words, it reflects his thoroughgoing subjectivism.

The central idea is that the instruments of production we call "capital goods" are clearly heterogeneous in form and function and their *value* depends on the expectations of the entrepreneurs who control their use. The essential role of the entrepreneur is to form capital combinations (combinations of complementary productive resources) for the purpose of producing valuable outputs for sale or for immediate use. The disequilibrium market process entails the formation, dissolution, and reformation ("regrouping") of capital combinations as some are revealed to be profitable and others not. In the regrouping process capital goods may be used for purposes other than those originally conceived by their producers to the extent that they are adaptable to such purposes – that is, to the extent that they are multispecific.

Complementarity and multispecificity are the phenomena that make the heterogeneous collection of capital goods in the economy an intelligible *order*, a *structure, the capital structure*. The capital structure of the economy defies any kind of objective evaluation and cannot be measured in any physical metric. Lachmann uses this insight to criticize not only the mainstream production function that is the staple of the literature on economic growth, but also the work of the preeminent Austrian capital theorist Eugen von Böhm-Bawerk, who attempted to derive a measure of physical capital based on time. Lachmann's *Capital and its Structure* is an attempt to reconstitute Böhm-Bawerk's valuable insights in a more acceptable form – replacing the idea of "roundaboutness" with "complexity."

Further details in Lachmann's capital theory may occupy us in the discussion to follow. An interesting issue that has been the focus of my work in recent years, together with my coauthor, Nicolas Cachanosky, is the the meaning of "capital." This term carries with it notorious ambiguity. At issue is the appropriate dimension for capital. Is it *quantity*, is it *time*, or is it *value* (money)? Obviously capital, however defined, has all three dimensions. But which is the "primary" dimension, the one that gives capital it's essential character? We argue, using insights from the financial literature, that understanding capital in *value* terms greatly simplifies and clarifies capital theory and, in addition, provides a coherent measure of the time involved in any production project of the kind that eluded Böhm-Bawerk. It turns out that of the Austrians, only Mises, Menger, and Kirzner seem to have had this view and, even then, according to some, have on occasion slipped into ambiguity. Irving Fisher, Frank Fetter, and to some extent John Hicks are among the non-Austrians who share that distinction of using the coherent finance-based view of capital (see Braun et al. 2016; Braun 2017; Lewin and Cachanosky 2018).

Eugen von Böhm-Bawerk

Close examination of Lachmann's work reveals, surprisingly, that although he focuses, like Hayek, on the physical (quantity) aspect of capital, he does not actually *define* capital in physical terms. Instead, when he talks about capital (standing alone), he appears to have a value construct in mind. And when he talks about capital stock, capital structure, or capital goods, he is referring to physical phenomena. It is possible to interpret his work as consistent with Mises's definition of capital:

Capital is the sum of the *money equivalent* of all assets minus the sum of the *money equivalent* of all liabilities as dedicated at a definite date to the conduct of the operations of a definite business unit. It does not matter in what these assets may consist, whether they are pieces of land, buildings, equipment, tools, goods of any kind and order, claims, receivables, cash, or whatever (Mises 1949: 262, italics added; see also Braun et al. 2016 and Braun 2017).

If true, this is both interesting and reassuring.

LACHMANN'S LEGACY: NATURALIZING WEBER TO THE AUSTRIAN TRADITION

by Hans Eicholz

Peter Lewin has captured well the spirit of Ludwig Lachmann with the words *enigmatic* and *controversial.* For most Austrians, Lachmann is a curious mixture of both the familiar and the strange. On the one hand, they assent readily to his rejection of standard neoclassical equilibrium analysis and formalism. His views on the central importance of ends and means as the signal feature of human action resonate very much with the Austrian tradition's understanding of purposefulness.

And yet, that said, there is an element that remains unfamiliar too. He seemed unnecessarily to complicate purposefulness with very specific purposes, and his understanding of the importance of time went further than most in stressing the dislocating consequences of change. Indeed, he went well beyond Menger, Böhm-Bawerk, and Mises, when they elaborated on the role of interest rates, the roundaboutness of production, or the place of malinvestment in the business cycle.

Carl Menger

It is precisely at the intersection of time and purposes that we must seek to understand the Lachmannian difference, especially as it concerns the role of plans in purposeful action. It is right here that his legacy with regard to equilibrating tendencies of all forms, including the more general notion of the evenly rotating economy or Hayek's spontaneous order, sets Lachmann apart from most others in the tradition to which he laid claim. And it is exactly here that Professor Lewin has hit his mark with respect to Lachmann's focus on the problems of order and institutions, both of which revolve around Lachmann's incisive use of Max Weber.

Reacting to Lachmann

Austrians have reacted in different ways to Lachmann's interest in Weber. One way has been to deprecate his approach as a flirtation with nihilism. That was the charge of Murray Rothbard. Weber was, from this perspective, just another historicist in the ranks of the German Historical School. Rothbard found authority for his view in Mises's own *Human Action*, where Mises asserted that "Max Weber … was not sufficiently familiar with economics and was too much under the sway of historicism to get a correct insight into the fundamentals of economic thought." (Mises [1949] 2007, v. 1, 126)

Others have tried a different tack, seeking to domesticate Weber by placing him closer to, if not actually within, the Austrian fold itself. Interestingly, these efforts are most often found among those who have been directly influenced by Lachmann. In the final analysis, however, both reactions are motivated by the desire to clearly differentiate the Austrian school of economics from its erstwhile rivals in the *Methodenstriet*, the German Historical School. (Maclachlan 2017, 1161-75) Lachmann was clearly aware of this desire, and proceeded carefully not to burden his analyses with unnecessary allusions to Weber's persistent claims of loyalty to the historical approach, though he did not try to hide those ties either. (Lachmann 1971, 54)

If we look then to Lachmann's treatment of Weber, he unpacks for us a more complicated perspective on that tradition out of which Weber's work arises. What one discovers from Lachmann is that Mises's characterization of the Historical School as simply out "to deny the existence of economics and to substitute history for it," or later, "the radical condemnation of economics" driven by the endeavor "to substitute *wirtschaftliche Staatswissenschaften* (the economic aspects of political science) for economics" (Mises [1949] 2007, v. 3, 601, 761), is not entirely correct. There were in fact diverse perspectives, even possibly liberal ones, within the Historical School.

Hence we find, subtly understated, Lachmann's almost casual observation that "Weber's rejection of the *Volksgeist,* espoused by some, though not all, adherents of the Historical School, is emphatic." And Lachmann would then go on, without any apparent hesitation, to refer to "the economists of the Historical School." (Lachmann 1971, 126) Indeed, he even found interesting similarities in the ways both Menger and Weber conceived of social phenomena.

Weber had criticized the founder of his own tradition, Wilhelm Roscher, for misunderstanding the notion of a controlling spirit of a people. It had been a heuristic tool in the hands of legal historians, but Roscher had made it much too "organic," too mystical and metaphysical. What was needed was a more systematic and rational way of accounting for the variety of ends one might find in any given society and around which social action could be analyzed and understood.

Accounting for the Content of Purposes: The Plan

Thus, in Weber's usage, what Roscher and certain others of their school often called a *Volksgeist* was really "nothing but a 'resultant of innumerable cultural influences.'" (Lachmann 1971, 60) This was the reason, ultimately, behind Weber's conceptualization of the Ideal Type. (Lachmann 1971, 33-34) It was one way of accounting for the variety of ends to which individuals directed their actions in a culture by framing a picture of their moral conceptions. Here Lachmann also noted that Weber's expression "is similar to one sometimes found in Menger for example when he described institutions as 'resultants of social forces.'" (Lachmann 1971, 60)

Lachmann's key insight was to extend Weber's insight into the interpretation not only of ends but also to the interpretation of means, or as Lachmann stated, "To act at all, men have to make plans, comprehensive surveys of the means at their disposal and the ways in which they might be used, and let their actions be guided by them." (Lachmann 1971, 30) The important observation here is the focus on the "*varying content* of similar ideas" (emphasis added). This was not purposefulness as a category, but rather the ever-varying content of specific purposes.

"In social theory," Lachmann went on, "our main task is to explain observable social phenomena by reducing them to the individual plans (their elements, their shape and design) that typically give rise to them." (Lachmann 1971, 31) Here then is the link to Weber and the tradition out of which he came: to focus on the historical particulars of the intentions of human actors. This is what allowed Lachmann to claim "legitimate usufruct from Weber's legacy." (Lachmann 1971, 32) And here was the divide from Mises and the other Austrians of his day. Their use of purposefulness laid emphasis on its categorical form, and this was precisely Mises's problem with Weber's historical sociological form of *verstehen.*

Praxeology: Category or Content?

Lachmann, it is frequently noted, significantly downplayed Mises's distinction between conception and understanding. It is true, as Lachmann observed, that Mises thought the term *understanding* could have been applied to both the economists' conceptualization of purposes and that of the historians, and interestingly, Lachmann moved quickly to reclaim the word *verstehen* for the uses of both, noting simply, "I do not believe that today's usage demands this distinction," (Lachmann [1966] 1977, 49) Yet it is not exactly what Mises had in mind. By *begreifen*,or conception, Mises still meant the pursuit of apodictic truth through reasoned deduction from the universally valid category of *purposefulness*: "Understanding," he insisted in *The Ultimate Foundations of Economic Science*, "does not deal with the praxeological side of human action. It refers to value judgments and the choice of ends and of means on the part of our fellow men. It refers not to the field of praxeology and economics, but to the field of history." (Mises 1976, 50)

What Mises really meant in his earlier *Epistemological Problems of Economics* was not that Austrian economists should apply the historian's approach to *understanding* specific choices of ends and means, but simply to apply a different definitional aspect of the same term: "Where conception is at all applicable," he insisted, "it takes precedence over understanding in every respect. That which results from discursive reasoning can never be refuted or even affected by intuitive comprehension of a context of meaning." Or put another way, "the domain open to conception" is one of "strict logical rule." (Mises [1933] 2013, 121)

Ludwig von Mises

Thus Mises would persistently return in his writings, again and again, to the point that "praxeology is not concerned with the changing content of acting, but with its pure form and its categorial structure," for the "scope of praxeology is the explication of the category of human action. All that is needed for the deduction of all praxeological theorems is knowledge of the essence of human action." (Mises [1949] 2007, v. 1, 47, 64)

Lachmann, by way of contrast, worried about the tendency to take such deductive reasoning too far. This is why, as Roger Koppl has noted, he had a psychologically complex view of purposes. He worried that the problem of social order would be too easily dismissed as one of automatic, mechanical functionality if viewed only from the deductive standpoint of purposefulness in general. Thus he took up, as Weber did, the content of the category to ask specifically when and how variation in specific purposes, in the means and ends of different individual plans, might make a significant difference to market processes. It is also why institutional thinking looms larger in Lachmann's thought than most other Austrian economists of his day, with the possible exception of Hayek.

The last paragraph of Lachmann's justly famous essay "The Significance of the Austrian School of Economics in the History of Ideas" merits closer reading. It is a marvelous example of the gentle rhetorical redirection that was a hallmark of Lachmann's style of argument. It is not that Austrian theory always embraced the specific complexity of the "economic plan" of individuals, but rather that it should do so now "on account of its central significance for economic theory of *Austrian character*" (emphasis added). And thus he concluded, to such plans, to such content, "praxeology, for which until now the plan and its structure have understandably occupied the foreground of interest, will increasingly have to turn in time to come." (Lachmann [1966] 1977, 62)

That is to say, "Hey, you Austrians, look over here! Lift the hood on this action axiom of yours and see what makes it go…"

LACHMANN ON VARIETIES OF SUBJECTIVISM, EXPECTATIONS-FORMATION, AND THE ROLE OF INSTITUTIONS IN FACILITATING ECONOMIC ORDER

by P.A. Lewis

1. Varieties of Subjectivism

As Lewin observes, a prominent feature of Lachmann's work is his commitment to the principle of subjectivism (that is, to the idea that the driving force of economic life lies not in objective states of affairs *per se* but in what they mean to people). (Lachmann 1977, 113, 117-18; 1986, 49) Lachmann ([1990] 1994, 244-46) identified three stages in the evolution of subjectivism. The first arose in the 1870s, when the marginal revolution brought to prominence the idea that goods have value not because of their objective properties but because people value them. The second stage saw the principle of subjectivism extended to people's choice of action, on which view different individuals may quite reasonably choose different means to achieving a given end simply because they are acting on the basis of different subjective ideas about how best to pursue that goal. "The subjectivism of means and ends," as Lachmann ([1990] 1994, 246) terms this second stage of subjectivism, is significant because if the external environment that shapes the outcome of any one person's actions includes the subjective, and so creative and unpredictable, conduct of other individuals, then people will often find it hard to anticipate some of the key influences that will determine the outcome of their own projects. More specifically, for Lachmann, the economic system is characterized by uncertainty in the Knightian sense that decision-makers will be unable to assign numerically definite probabilities to future events, including the various possible consequences of their own actions. (Lachmann [1956] 1978, [1976] 1994, 234-35)

Friedrich von Hayek

This does not, however, mean that purposeful conduct is impossible. Drawing on the work of Hayek's former LSE doctoral student G.L.S. Shackle, Lachmann argues that people are able to deal with their ignorance of the future and act purposefully by using their imagination to envisage desirable future scenarios and then deciding which actions might produce them. "The future is unknowable," Lachmann ([1976] 1994, 236) famously wrote, "but not unimaginable." On this view, subjectivism embraces not just people's choice of means but also the creation of the ends or goals they are trying to achieve and the expectations that inform their choice of goals. Lachmann terms this "the subjectivism of active minds." (Lachmann [1990] 1994: 246)

Lachmann's "radical' subjectivism was not received with unbridled enthusiasm by at least some other Austrians, who viewed it—erroneously, I shall argue—as undermining economists' efforts to give a systematic account of how the market economy can produce an orderly outcome. (Rothbard 1989, 56-57, 59 n. 20; Kirzner 1992, 4; 2000, 49-50) The problem with the subjectivism of active minds, according to these critics, is that if the expectations that inform a person's plans are an "autonomous" product of his/her creative imagination, and so insubstantially founded upon objective facts that there is a kaleidoscope of ceaselessly changing beliefs about the likely course of future events, then it becomes hard to see how people can anticipate one another's conduct accurately enough for the plan coordination required for social order to arise. Invoking the informational role of prices (Hayek [1945] 1948) does not by itself dispose of this problem; price signals themselves need to be interpreted and their significance divined, so the subjectivism of active minds re-enters the arena, and there arises once more the prospect of a divergence of expectations that undermines plan coordination. In this way, according to Lachmann's critics, radical subjectivism effectively sabotages attempts to show that there is a systematic tendency for the price mechanism to induce consistency between individuals' decisions and thereby produce an orderly allocation of resources.

2. Lachmann on the Possibility of Social Order: The Role of Institutions

Such charges are, however, mistaken. As Lewin notes, Lachmann readily acknowledges that market economies usually do produce reasonably orderly allocations of resources, implying that in practice people often *are* able to form expectations that are accurate enough to facilitate plan coordination:

> "a world of world of uncertainty clearly is not a world of chaos. To say that economic phenomena cannot be predicted in the sense we expect such an activity from a science is not to say that men are unable to form expectations about the future outcome of the actions they presently are planning." (1986, 139; also see Lachmann [1959] 1977, 84, 86.)

In order to understand how this is possible, it is necessary to appreciate the significance of the fact that for Lachmann people are social beings, whose expectations and conduct are all profoundly shaped by the set of institutions in which they are embedded. A key reference, not explicitly mentioned by Lewin, is a short but fascinating book published by Lachmann in 1970 called *The Legacy of Max Weber*. Lachmann argues there that institutions provide a set of shared rules stipulating in general terms how people should interpret and respond to their circumstances. These "instruments of interpretation," as Lachmann ([1956] 1978, 22) felicitously describes them, "prescribe certain forms of conduct and discourage others," limiting—without precisely determining—the range of actions people might take and thereby "reduc[ing] uncertainty." (Lachmann 1990, 139, 141; also see 1970, 37) This makes people's conduct more predictable, facilitating the formation of reliable expectations and mutually compatible plans:

> An institution provides a means of orientation to a large number of actors. It enables them to co-ordinate their actions by means of orientation to a common signpost. If the plan is a mental scheme in which the conditions of action are co-ordinated, we may regard institutions, as it were, as orientation schemes of the second order, to which planners orient their plans as actors orient their actions to a plan…. They enable each of us to rely on the actions of thousands of anonymous others about whose individual purposes and plans we can know nothing. They are nodal points of society, co-ordinating the

> actions of millions whom they relieve of the need to acquire and digest detailed knowledge about others and form detailed expectations about their future action. [Lachmann 1970, 49-50]

Taken together with the information about the scarcity of resources provided by relative price signals, the knowledge of people's future conduct provided by such institutions typically enables people to adjust their plans to one another so that each has a decent chance of coming to fruition. (Lachmann 1970, 12-13, 21-23, 61-63; 1990, 138-41; also see Lewis and Runde 2007.)

3. Theories of Expectations-formation

Another way of thinking about this is to reflect on Lewin's remark that Lachmann sought to incorporate more centrally within Austrian economics "the importance of the subjective and autonomous nature of expectations." It is upon the word "autonomous" that I wish to focus here. It is certainly a word used by Lachmann to describe his views on the nature of expectations. (See, for example, Lachmann 1976, 129.) Yet it is perhaps rather misleading, for if deployed in an unqualified way it might be taken to suggest that Lachmann believed that people's expectations were completely unmoored from, and so determined independently of, social reality. But as we have seen, that was not the case. For Lachmann, people's expectations are shaped, but not entirely determined, by the social context, in particular the social institutions, in which they are situated.

In this regard, Lachmann arguably offers a more sophisticated approach to the analysis of expectations than does Shackle because—unlike Shackle—he marries an emphasis on the fact that people's expectations and choices are not merely a mechanical response to their circumstances with a recognition that those aspects of human agency are nevertheless shaped and channelled—without being uniquely determined—by social institutions. Hence Lachmann's remark (1970, 37) that "human action is not determinate, but neither is it arbitrary.... In other words, human action is free within an area bounded by constraints." And, as we have seen, it is this recognition of the role of social institutions in informing and guiding—or orienting, to use Lachmann's preferred term—people's expectations and actions that enables Lachmann to couple his strongly subjectivist view of economic agency with a coherent account of the possibility of spontaneous social order, thereby avoiding the nihilism with which his critics so often charged him. (Lachmann 1970, 12-13, 37-38; 1986, 139-40; also see Lewis 2008 and Lewis and Runde 2007.) This marks a significant contrast with Shackle, who remained highly reluctant to acknowledge the way in which institutions inform and guide people's expectations and actions and as a result struggled to give a convincing account of social order. Lachmann by contrast offers a richer account of how institutions both facilitate and constrain human agency in a world of radical uncertainty and thus is more able to avoid the problems to which arguably Shackle succumbs. (Runde 1996; Lewis 2017, 19-22; Dekker and Kuchař 2017, section 2)

Ludwig Lachmann

However, as Lewin rightly observes, Lachmann is aware that there is no guarantee that the market will always and everywhere produce greater plan coordination even in the absence of external shocks. For Lachmann, notwithstanding the role of institutions in channeling people's interpretations, there still arises the possibility that people may respond so creatively—and, therefore, so unexpectedly—to their circumstances that they surprise one another and develop plans that are less, not more, compatible with one another. On this view, discoordinating forces may arise endogenously as part of the market process and may even on occasions outweigh the capacity of the institutions of the liberal market economy to bring plans more closely into conformity with one another. (Lachmann 1970, 46; 1976, 128-30; also see Rizzo 1996, xvii-xxi and Lewis 2011, 193-95.)

Hayek reaches very similar conclusions in at least two key regards. First, like Lachmann, Hayek ultimately came to realize that the requisite knowledge is disseminated not only by relative prices but also by shared social rules. (Hayek 1976, 107-32; also see Vaughn 1999; Lewis 2014 and 2015, 1170-71.) Second, as Lewin intimates, Hayek too viewed the question of the tendency of the market system to greater plan coordination as an empirical one, centring on the capacity of the institutions within which activity takes place to enable people to learn enough to adjust their plans. (Hayek [1937] 2014, 67-68) As Hayek puts it,

> "While the analysis of individual planning is in a way an *a priori* system of logic, the empirical element enters in people learning about what other people do.… [Y]ou can't claim, as Mises does, that the whole theory of the market is an *a priori* system, because of the empirical factor which comes in that one person learns about what another person does." (Hayek, quoted in Caldwell 2004, 221).

Of course, it appears *ex posteriori* that the coordinative powers tend more often than not to prevail. But, as both Hayek and Lachmann recognized, there can be no guarantees that that will always be the case.

DEMYSTIFYING LACHMANN

by Bill Tulloh

Peter Lewin, more than anyone, has been responsible for making Lachmann's work accessible to modern scholars. As my own understanding owes much to Peter, I find myself in the difficult position of finding an area where I disagree.

Enigmatic and Controversial

When I first became aware (in the late '80s) of Lachmann's place in the Austrian revival, the message was clear: Lachmann was the "dangerous" member of the founding triumvirate. His work came with a warning: "caution, stay back" or, perhaps, "handle with care."

> “HIS WORK CAME WITH A WARNING: "CAUTION, STAY BACK" OR, PERHAPS, "HANDLE WITH CARE."”

This view was shaken when I was tasked with compiling a collection of Lachmann's articles.[1] The picture that emerged from this effort contained greater richness, depth, and subtlety than was provided by the caricature of Lachmann as a troublemaker. Yet it was only as I dug deeper into his early work, and its context, that I began to see a coherent story.

Lachmann's concern with social economics, *verstehen*, and intertemporal plan coordination sprang from the same broad tradition as Menger, Weber, Mises, Schumpeter, Schutz, and Hayek. Continental scholars in Austria, Germany, Italy, Sweden, and elsewhere were engaged with questions of how best to integrate theory with history, individuals with institutions, and statics with dynamics. By the time Lachmann became a student in the late 1920s, the travel time between Berlin and Vienna had been greatly reduced.

Alfred Schütz

This rich continental tradition did not survive the move to post-World War II America. The arid soil of "late classical formalism" proved inhospitable to the lush European flora. Lachmann's dubious reputation had more to do with the particulars of the revival than anything peculiar to Lachmann's approach. Lachmann's message was that we had to recover the past in order to make progress in the future.

From Expectations to Institutional Order

Peter puts expectations at the center of the Lachmann story. I see them as playing more of a supporting role.

The role of heterogeneous expectations was no doubt important to Lachmann. He never tired of pointing out their significance and was always quick to praise his friend Shackle's work in this regard. But Lachmann was more than just a cheerleader for Shackle's approach; he was also consistent in urging him to take interpretation and institutions more seriously.[2] For Lachmann, subjectivism (of the active mind) encompasses not only expectations of an unknowable future, but interpretations of past experiences: just as expectations diverge among people, so will their interpretations of the past.

Lachmann's interest in expectations grew out of his wrestling with the question of intertemporal plan coordination, stemming from the interwar debate on intertemporal equilibrium.[3] The upshot of this debate was to bring attention to the questions of knowledge, learning, and expectations. Lachmann, like Hayek, turned to institutions in search of answers.

Lachmann's work on institutions can be understood as trying to answer the questions raised by Hayek's "Economics and Knowledge." How, in a world of partial knowledge and constant change, can the separately constructed plans of individual actors lead to productive coordination? His work on expectations should be understood in this context. It was the central role of the plan, linking means to ends, that led Lachmann to look towards Mises and Weber for solutions to this problem. Lachmann did indeed consider himself a Hayekian while at LSE, but this went much deeper than just capital and business-cycle theory.

Peter dislikes "Hayek's conception of plan-equilibrium," and calls for an "institutional structure that can accommodate a huge diversity of incompatible plans." Hayek and Lachmann would agree. Hayek in 1937 speaks of mutual compatibility of plans and perfect foresight. Hayek in 1974 speaks of maximal compatibility and adaptation to the unknown.[4] He proposes the notion of abstract order based on abstract rules that consists of a system of abstract relations between elements: the elements change, but the order persists.

Lachmann addresses the same issue of coherence and change in *The Legacy of Max Weber*.[5] Lachmann saw institutions as providing the coherence needed for actors to coordinate their plans, while also providing the flexibility required to adapt to constant change. Lachmann's distinction between fundamental and secondary institutions has many parallels to Hayek's abstract order. Fundamental institutions represent the abstract rules, while secondary institutions embody the abstract relations.[6] Institutions, according to Lachmann, do more than just serve as "rules of the game." While fundamental institutions might fit that characterization, secondary institutions do not.

Capital: General and Specific

I am excited about the recent exploration of the "finance-view" of capital. I hope this reinvigorates Austrian capital theory and leads to a tighter integration with finance theory.

Lachmann would have approved. He emphasized capital gains and losses, futures markets, and stock exchanges as key drivers of the market process. He called for "a theory of business finance based on our knowledge of entrepreneurial action in response to change, expected and unexpected."[7] Lachmann made little progress toward this goal, and he was writing before the revolution in modern finance, so this an area ripe for further development.

However, in the process of adopting the finance view, I hope we don't lose sight of Lachmann's signature contribution. Peter notes: "At issue is the appropriate dimension for capital. Is it quantity, is it time, or is it value (money)?" Lachmann highlighted another dimension: specificity. Specificity is measured in terms of human purposes. Capital goods exist on a spectrum from general purpose money to single purpose capital goods; degrees of specificity distinguish finance capital from capital goods.

For Lachmann, this is the role of the entrepreneur – to transform general purpose money invested in the enterprise into specific capital goods, products, and services that can later be transformed back into money in the form of profits from sales. As Lachmann writes, "But the entrepreneur's function as regards capital is not exhausted by the hire of services. Here his function is to specify and make decisions on the concrete form the capital resources shall have."[8] Peter is correct in emphasizing that the entrepreneur's job is greatly aided by the ability to calculate in terms of monetary value, but this does not substitute for the act of specifying the particular ends that the enterprise decides to pursue, nor specifying the particular means by which to pursue them.

Again, it was their emphasis on purposive human action – the subjective choice of means and ends – that linked Lachmann's two great heroes -- Mises and Weber. The subjectivism of means and ends, embodied in plans that incorporate the interpretation of the past and the expectation of the future, form the common thread for Lachmann. It ties together his views on entrepreneurship, institutions, and expectations, as well as finance and capital theory.

More Relevant than Ever

The questions Lachmann posed -- on the nature of capital, the emergence of secondary institutions, and the coherence and flexibility of the institutional order – seem especially critical as we enter a new era of crypto-commerce. Blockchains promise to create new classes of digital assets that blur traditional distinctions between financial capital and capital goods.

Hernando De Soto has demonstrated the crucial link between property rights and capital formation; tokens created by public blockchains represent new types of electronic property rights that can be transferred via smart contracts.[9] But the change is not only one of new types of goods that can be electronically traded. Blockchains also make possible new types of decentralized organizations and social institutions.[10] Technical innovation has sparked rapid experiments in new types of secondary institutions, but it has also raised questions about their long-term coherence in the face of rapid change. These questions are at the heart of Lachmann's work.

Lachmann, I imagine, would welcome these developments. As he might write today: "Whether we send a text, wait for an Uber, or spend a bitcoin, our action is in each case oriented towards a complex network of human action…. The existence of such institutions is fundamental to civilized society. They enable each of us to rely on the actions of thousands of anonymous others about whose individual purposes and plans we can know nothing."[11]

Endnotes

[1.] Don Lavoie, ed. *Expectations and the Meaning of Institutions: Essays in Economics by Ludwig Lachmann* (London: Routledge, 1994).

[2.] L. M. Lachmann, *Capital, Expectations, and the Market Process: Essays on the Theory of the Market Economy, ed. with an Introduction by Walter E. Grinder* (Kansas City, MO: Sheed Andrews and McMeel, 1977), pp. 81-93.

[3.] L. M. Lachmann, "Preiserwartungen und intertemporales Gleichgewicht," *Zeitschrift für Nationalökonomie*, 8:1 (1937), 33-46.

[4.] F. A. Hayek, "Economics and Knowledge," *Economica*, 4:13 (1937), 33-54, and F. A. Hayek, *Law, Legislation, and Liberty, v.1 Rules and Order* (Chicago: University of Chicago Press, 1973).

[5.] L. M. Lachmann, *The Legacy of Max Weber* (London: Heinemann, 1970).

[6.] B. Tulloh, and Mark S. Miler, "Institutions as Abstraction Boundaries," *Humane Economics: Essays in Honor of Don Lavoie* (Cheltenham, UK: Edward Elgar Publishing, 2006), pp. 136-88.

[7.] L. M. Lachmann, *Capital and Its Structure* (Kansas City, MO: Sheed Andrews and McMeel, 1978), p. 89.

[8.] Ibid., p. 22.

[9.] Hernando De Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (New York: Basic Books, 2000). See also, Mark S. Miller and Marc Stiegler, "The Digital Path: Smart Contracts and the Third World," *Austrian Perspectives on the Internet Economy* (London: Routledge, 2003), pp. 63-88.

[10.] S. Davidson, Primavera de Filippi, and Jason Potts, "Blockchains and the Economic Institutions of Capitalism," *Journal of Institutional Economics*, January 18, 2018, pp. 1-20; <https://doi.org/10.1017/S1744137417000200>.

[11.] L. M. Lachmann, *The Legacy of Max Weber*, p. 50 (with modifications).

LUDWIG LACHMANN – RADICAL PROPHET

by Mario J. Rizzo

In the Fall of 1976 I left the University of Chicago to accept a postdoctoral fellowship at New York University in the new Austrian program directed by Israel Kirzner. Although I had met Ludwig Lachmann earlier, it was only at NYU that I gained a true appreciation for his intellect and his work. My education at Chicago was deep but not broad. I learned, in its heyday, Chicago "price theory" and a monetarist slant on macroeconomics. Prior to my education at Chicago I had already studied the great Austrian writers, including Menger, Böhm-Bawerk, Kirzner, and Rothbard. But what I took away from them was primarily a *static* Austrian economics. This is true notwithstanding Kirzner's *Competition and Entrepreneurship* (1972), which at the time seemed perfectly consistent with the work that Harold Demsetz and Yale Brozen were doing on industrial concentration and profit rates. It seemed like a little dynamic spice in a basically comparative static framework.

Lachmann's contribution to my education consisted in making me aware of neoclassical economics outside of the Chicago tradition and of a more thoroughgoing subjectivist tradition finding its voice within Austrian economics and within other schools of thought as well. His plea to extend the subjectivism of preferences to the subjectivism of expectations was met with skepticism. This is because many Austrians thought this would imply the radical indeterminacy of market processes. Lachmann often argued that there was not just one Market Process but that processes differed importantly depending on the nature of the market. Asset markets were particularly volatile because here prices were a reflection of expectations. These expectations were of a radically uncertain future about which people disagreed. Asset markets are speculative markets. Their equilibrium can only be a temporary one in which divergent expectations are precariously balanced.

The economics world in which Lachmann discussed these issues was dominated by the discussion of rational expectations and efficient markets. Dissent existed but it was beaten down by a display of relatively advanced mathematics. Lachmann was ahead of his time. Behavioral economics was bringing psychology back into economics, yet its developments were too fragile and tentative at the time to have much impact. It was said that *economic* expectations reflected the structure of the economist's model while *psychological* expectations were ad hoc. The former were "rational," and the latter were arbitrary.

Today psychology has been brought back into economics but in a way Lachmann would find quite odd. Behavioral economists conceive of expectations as systematic and persistent deviations from the standard neoclassical model. But since Lachmann thought that the standard model was inapplicable in asset markets, it would be unclear what actual expectations were deviating from. An explanation in terms of "bias" implies the existence of a true value if only in stochastic terms.

Lachmann would have preferred a more direct assessment of expectations. Context would be important. Heuristics would also have had their place, especially insofar as they enable individuals to deal with situations of limited data. But the future would still be unknowable, and thus he would continue to view asset markets as fragile. This does not seem to be an inappropriate lesson to have (re)learned, especially since 2007-8.

And yet one cannot but get the sense that Lachmann went too far in the direction of "unknowability" and the instability of asset markets. People understand that the future is truly uncertain, and they adapt to that. They create structures and institutions that moderate the impact of incorrect expectations. They also can learn (hopefully) to avoid further destabilization of the system by stable macroeconomic policies. In our book, *The Economics of Time and Ignorance*, Jerry O'Driscoll and I distinguished between typical and unique features of future events and developed a concept of "pattern equilibrium." People do not have to predict the future precisely to implement suitably flexible plans. And the future is not completely unlike the past – since it grows out of it.

Lachmann was also not particularly happy with the standard neoclassical theory of choice. I remember his criticisms of the idea of a completely ordered preference field. Even Pareto thought that the assumption only made sense in the context of repeated and familiar options. Axiomatic choice theory exhibits the same neglect of time as a static (or rational-expectations) approach to market adjustment. I think Lachmann would have looked aghast at behavioral economists rejecting the realism of the choice axioms but then elevating them to normative standards. He knew that the axioms were properties of puppets created by economists and human beings were not – nor should they aspire to be – puppets.

On Lachmann's capital theory, Peter Lewin is the expert. Obviously capital involves expectations, change, and uncertainty. In a dynamic world this means the altering of capital combinations as some prove to be unprofitable. But once the homogeneity of capital is rejected, concepts like complementarity, multispecificity, formation, and regrouping of capital goods become critical. Analysis of these was the purpose of Lachmann's *Capital and Its Structure*. This analysis was taken further by Lewin in his own *Capital in Disequilibrium* and in later articles.

Where does Lachmann's economics take us? I think Lachmann was a subjectivist but in a different tradition from that of Mises, Rothbard, and even Kirzner. He had a lot of difficulty with apriorism. I remember him telling me that he did not know what apriorism is supposed to be if not subjectivism. We have certain categories of understanding because we are all human beings sharing the same social world. Ideas like purposes, meaning, and expectations are the stuff of social-science explanations. Some Austrians went too far in claiming what could be known about markets simply through an analysis of these formal concepts. I misspent many a year expecting to get useful knowledge directly from the initial hundred pages or so of Mises's *Human Action*. Clearly, Mises gets carried away with his apriorism.

On the other hand, does Lachmann's subjectivism lead to a skepticism about the equilibrating properties of markets? In one sense, yes. And that is all to the good. Neoclassical conceptions of equilibrium can be too rigid and too epistemically demanding. Even the Austrian variant as a target toward which the system moves but never reaches is inadequate. What we need is more fuzziness or imprecision in our conceptualization of the equilibrium. We can reconcile equilibrium with certain kinds of learning as in the case of a flexible or adaptable research program. This is what *The Economics of Time and Ignorance* is about. I never got the sense that Lachmann fully understood what O'Driscoll and I were trying to do. We wanted to extract the less-skeptical analytical core from Lachmann's work drawing on Carl Menger, Max Weber, Alfred Schutz, and others in the Austrian pantheon. We even saw merit in aspects of Keynes's subjectivism, as did Lachmann himself.

The legacy of Ludwig Lachmann for Austrian economics is to open it up to new ideas, to loosen the grip of static apriorism, to be more empirical in our study of markets, and to reject sacred cows of any kind. We used to discuss these and other matters on Friday mornings. If I had to do something else and couldn't make a meeting, he told me that I had to "make it up." I miss those meetings, and I miss him.

THOUGHTS ON EQUILIBRIUM AND WEBER

by Peter Lewin

Methodology: Weber

An indication of the potential work still to be done on the second theme running through Lachmann's contributions that I mentioned in my previous posting, namely, the importance of the work of Max Weber for Austrians, is Lachmann's 1971 book (UK edition in 1970), *The Legacy of Max Weber*. Bill Tulloh, Hans Eicholz, and Paul Lewis cite this work, and Eicholz provides an extremely useful analysis of the relation of Weber's insights to Lachmann's work on "purpose" and also of Mises's view of Weber. This summary will be very helpful for those seeking an understanding of the "Weberian connection." There is more to be discovered, including the development of this theme from Lachmann's early German period.

Of particular interest in Lachmann's book (revisited in his 1986 work, 151) is his introduction of the *real type* as distinguished from Weber's *ideal type*. The former refers to a category of social phenomena discernable from real historically specific events -- compared to the latter, a category of more or less "universally" valid social types. This bears on Lachmann's view of the relationship between economics and history, each one being necessary for the practice of the other, and how this compares, for example, to Mises's conceptions. (See Lachmann 1986, 148-56.)

Max Weber

Lachmann also distinguishes between different types of social institutions – *fundamental* and *secondary*, as explained by Bill Tulloh in his response. Tulloh sees in this "many parallels to Hayek's abstract order. Fundamental institutions represent the abstract rules, while secondary institutions *embody* the abstract relations" (my italics). Indeed, Bill and his collaborators' work on the notion of "abstraction" is tantalizing and begs for further illumination to become fully understandable to those like me outside the technical computer community. I understand it imperfectly in relation to modularization, which I intend to discuss briefly in a later post, but know that there is more to it. Bill suggests further that "Institutions, according to Lachmann, do more than just serve as 'rules of the game.' While fundamental institutions might fit that characterization, secondary institutions do not." I don't immediately see this and would appreciate elucidation. Don't historical contingent institutions (which embody the more abstract and general rules of the games) define in more specific terms the application of the rules of the game?

Methodology: Plan Disequilibrium

Eicholz aptly characterizes Lachmann's preoccupation as "the intersection of time and purpose." Lachmann describes the "thrust toward subjectivism" (Lachmann 1986, 148) that he pursued as occurring in three steps: first, the realization of the subjectivism of value, namely, the subjective nature of the ends pursued by human actors that constituted the purpose of their actions; secondly, the subjectivism of the means as well as the ends, in fact of the whole means-ends framework (from which a subjective theory of capital naturally emerges); and, thirdly and most prominently, the subjectivism of expectations. This tripartite subjectivism guarantees that individuals, in their preferences (ends, purposes), in their matching of means to ends subjectively evaluated, and in their expectations, will differ from one another. Means, ends, and expectations are all connected in the *individual plan*, the most important methodological/epistemological construct of all. There will be a divergence not only of preferences and the perception of how to best achieve them, but also of expectations. And this suggests that, in their interactions, human beings will commit errors. Among disparate expectations of the same future, at most one can be correct. (It is not, as Bill Tulloh suggests, that I "dislike" Hayek's view of plan coordination. I like it very much as an improvement on a conception of equilibrium in terms of physics. Equilibrium in economics is about individual plans or it is not economics. I merely note that such an equilibrium is a vanishingly unlikely event.)

This is the root of the so-called "Lachmann problem." (Koppl 1998) Plan-equilibrium entails the consistency and continuing fulfilment of individual plans. (Hayek 1937; Lewin 1997) Human action presupposes causation, the use of means toward the achievement of ends. If the probability of plan-failure is high, as it would be in a dynamically changing world, the likelihood of such plan-equilibrium is severely imperiled. And, in fact, the coherence of human action itself is endangered if individuals cannot count on the reliability of the causal means-ends framework to inform their plans and actions.

Paul Lewis discusses the resolution of this problem to which he and others have contributed in the identification of *social institutions* as constraints on the divergence of individual plans, ensuring that although plan-equilibrium will remain elusive, social outcomes will not be chaotic, but, rather, will be *orderly*. Most specifically in Lachmann's book on Weber, but also elsewhere, he points to the existence of social institutions as the essential explanation of order in the social world, an outcome "far from the nihilistic crowd." (Lewis 2011; also Lewis and Runde 2007)

For a long time this account, while certainly correct and helpful, has seemed incomplete, and I've thought that a fuller understanding is to be had by "unpacking" the notion of expectations. When Lachmann (and Hayek) talk about divergent expectations, we should ask: expectations of what? The notion of expectations as a nonspecific catch-all is inadequate. What specifically do individuals form expectations about when they make plans? Likely candidates for types of expectations are not only the specific outcomes of their commercial ventures, their investments, evaluations, etc. but also, importantly, expectations about how people in various contingencies can be expected to act toward them, including the contingency of plan failure. And about this there is a high degree of certainty because "the rules of the game" are embodied in explicit and tacit institutionalized behaviors. There is a high probability of these expectations being fulfilled. We can count on people acting according to the laws governing property rights, contracts, and bankruptcy, and to exhibit generally civil (nonviolent) behavior. I think this is closely related to the distinction made between expectations of *typical* and *unique* events. (O'Driscoll and Rizzo 1985)

Two important implications emerge from this. First, it is the existence of this "plan-equilibrium" at the institutional level that allows for the existence of a high degree of "plan-disequilibrium" at the level of entrepreneurial action broadly understood. Individual plans are multilayered, and some levels are likely to be very consistent across individuals while others are dramatically inconsistent. Individuals can plan effectively, relying on the institutional structure to constrain the downside of the probable failure of their commercial ventures in whole or in part. It is institutional stability that allows for the persistence of this dissonance without disorder. And, secondly, the existence of this discoordination of entrepreneurial plans is actually *necessary* for the market process to function properly and beneficially. A few highly valuable productive innovations are more likely to emerge out of a thousand entrepreneurial visions than out of a hundred. (Lewin 1997, 2016; also Loasby 1994) Diversity of viewpoints is desirable, at least up to a point, a point evolutionarily revealed through the market process itself. It is the institutional structure that most closely approximates the facilitation of "permissionless innovation" (see this: <http://permissionlessinnovation.org/>) that will prove most conducive to economic progress as we understand it. (Thierer 2016)

Thus this drawing out of the implications of Lachmann's epistemology reveals an important policy implication.

(In a later posting I will talk about "understanding Lachmann heterogeneously" in response to the comments by Rizzo and Tulloh.)

LACHMANN ON CAPITAL THEORY, ENTREPRENEURSHIP AND BUSINESS STRATEGY, EXPECTATIONS-FORMATION, AND THE ROLE OF INSTITUTIONS IN FACILITATING ECONOMIC ORDER

by P.A. Lewis

In my first contribution I argued that Lachmann should not be regarded as a nihilist because his commitment to radical subjectivism does not prevent him from offering an account of how social order is possible in decentralized market economies. In this contribution I wish to examine another way in which Lachmann has made a contribution to positive economic analysis, by exploring how his capital theory has helped to inform and inspire efforts to construct a distinctively Austrian approach to business strategy and entrepreneurship. In doing so, I shall take up Lewin's invitation to explore in greater detail Lachmann's thinking about capital and also build on some of Bill Tulloch's remarks on that topic.

Lachmann on Capital

Lachmann's is, of course, a subjectivist theory of capital. "The generic concept of capital … has no measurable counterpart among material objects," Lachmann ([1956] 1978, xv) writes. "Beer barrels and blast furnaces, harbour installations and hotel-room furniture are capital not by virtue of their physical properties but by virtue of their economic functions. Something is capital because the market, the consensus of entrepreneurial minds regards it as capable of yielding an income." More specifically, as Bill Tulloch observes, capital goods are defined by reference to their place in a subjectively defined production plan. Complementary capital goods fit together and contribute to a particular production plan in ways that are expected to add value and yield profits. Of course, executing that plan takes time; it involves entrepreneurs purchasing and using resources before the demand for, and the final price of, the output being produced is established. Hence, for Lachmann, entrepreneurs must act in the face of radical uncertainty, seeking to "wrest economic meaning from the market" (Lachmann 1977, 102) by using their judgment to identify how assets can be combined so as to produce goods and services that people are willing to buy at a price that makes the whole enterprise profitable. (In doing so, they also rely on social institutions, as described in earlier contributions to this conversation.)

Uncertainty implies that the profitability of those plans cannot be definitively established *ex ante*. Ultimately, plans must be put to the market test. When—as must inevitably happen, given the diversity of views about the future held by entrepreneurs—some plans fail to live up to expectations and yield losses, entrepreneurs must decide whether assets need to be redeployed or scrapped. This is where the heterogeneity and multiple-specificity of capital goods becomes significant because those attributes mean there are limits to the combinations in which capital goods can be redeployed or regrouped if the initial plan is revealed to be unprofitable and in need of change. It is, once again, the entrepreneur who must exercise his or her judgement about how plans should be revised. As Lachmann writes, "We are living in a world of unexpected change; hence capital combinations … will be ever changing, will be dissolved and reformed. In this activity we find the real function of the entrepreneur." ([1956] 1978, 13) For Lachmann, therefore, it is the entrepreneurial search for profitable capital combinations that drives the ongoing process of capital development.

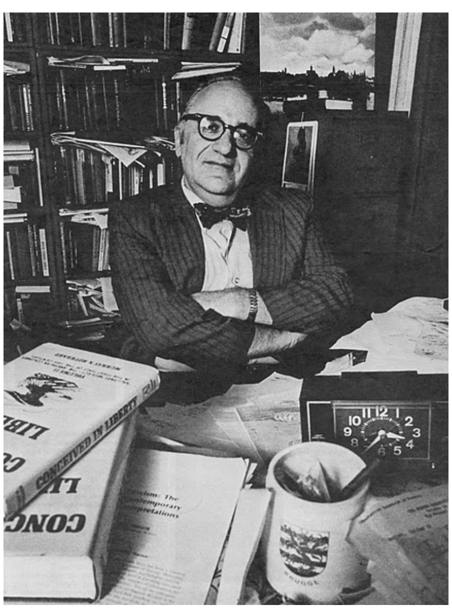
Applications to Business Strategy

Significantly, Lachmann's capital theory has been used by scholars in the field of business strategy to provide a framework for their work on entrepreneurship and organization studies. On this view, business strategy involves entrepreneurs seeking to penetrate the fog of uncertainty that clouds the future by using their imagination and judgment to identify ways in which assets can be (re)combined so as to produce goods and services that people can be persuaded to buy, thereby adding value and yielding profits. What is appealing about Lachmann's work is that it provides a single theoretical framework that brings together many of the features of the world emphasized, but in a fragmented way, by the strategic entrepreneurship literature: the importance of the entrepreneurial imagination, the centrality of the creative (re)combination of assets, the significance of time and uncertainty, the processual nature of the market, and the role of institutions in facilitating business activity. By showing how those ideas can be woven together to form a unified account of the entrepreneurially driven market process, centering on the imaginative but fallible creation, dissolution, and regrouping of complementary combinations of capital goods, Lachmann's theory promises to bring greater coherence and fresh insights to the field of strategic entrepreneurship and organization studies. If that is indeed the case—and there is a burgeoning literature arguing to that effect—then it provides further evidence for the claim that far from being nihilistic, Lachmann's radical subjectivist approach can inspire fruitful new lines of research on the topics of entrepreneurship, strategy, and the firm. (Chiles et al., 2007, 2010; Mathews 2010; Lewin and Baetjer 2011; Foss and Klein 2012; Endres and Harper 2013).

UNDERSTANDING LACHMANN HETEROGENEOUSLY

by Peter Lewin

Mario Rizzo and I are both "Chicago Austrians." But in a significant way, our journeys went in exactly opposite directions. (See my "A Personal Tribute" at <https://thinkmarkets.wordpress.com/2018/07/06/a-personal-tribute/>.) Whereas, as he reports, he came to Chicago with a foundation in Austrian economics by way of the usual suspects, from Menger to Kirzner including Rothbard, my foundation in Austrian economics started with Lachmann and proceeded to Hayek, Böhm-Bawerk, and Menger. I had read little of Mises, and I don't think I knew of the existence of Rothbard.



Murray N. Rothbard

I was surprised to find in the "other Austrians" views much closer to the neoclassical paradigm than Lachmann's and views apparently devoid of his concerns about the implications of divergent expectations. But although we started from different ends of the spectrum as it were, I am amazed at the extent to which we ended up in the same place. In every significant respect I can think of, Mario's and my views on Lachmann coincide. I find nothing to disagree with in his work over the years extending Lachmann's insights, for example in his (and Jerry O'Driscoll's) 1985 classic, *The Economics of Time and Ignorance*, or in his work on law and economics or in his work (together with Glen Whitman) on the new behavioral economics to which he alludes in his response and which the reader is well advised to explore further for the best assessment of that literature that I know of. I agree also with his comments on methodology on both Mises and Lachmann. Perhaps in a later posting I may expand on what I think is the prevailing message for Austrians of Lachmann's radical subjectivism of divergent expectations.

So if you consulted me or Mario Rizzo on Lachmann, you would probably get a very similar picture. This is not true for all Lachmann enthusiasts, and Lachmann would certainly relate to the observation that different people may emphasize different aspects of his work as central and motivating and that one's understanding and interpretation of writings is path-dependent on the experiences of the reader. For example, Bill Tulloh's experience contrasted interestingly with mine – and I am thankful it did, so I could be the recipient of his different viewpoint, which is so insightfully complementary to my own.

I came to Lachmann as a clueless, but highly motivated undergraduate. For me he was all about the subjectivism of expectations, and I guess that entre has stayed with me ever since. It is ironic that in those very years when I was learning from him (1966-1971), he was busy with *The Legacy of Max Weber,* a project I learned about only later and about which I am still learning. Bill, on the other hand, as he reports, learnt of Lachmann during after Austrian revival and like many around him was greatly influenced by the insights of Don Lavoie, whose view of Lachmann was much more extensively based on his understanding of continental philosophy. Lavoie and Tulloh understood the milieu in which Lachmann's thinking was shaped – the very nature of which provoked Rothbard and others to be deeply suspicious of him. Others who came to Lachmann via Lavoie's personal influence were Steven Horwitz, Peter Boettke, David Prychitko, Howard Baetjer, and others. (HT: Steve Horwitz.)

So Tulloh has a good point when he suggests that attention to the divergence of expectations (provoked by Hayek's "Economics and Knowledge") came later and that this matter was, in some important sense, derivative of Lachmann's more fundamental subjectivism based in both Menger and Weber and related works. But for many the expectations story is the more resonant and where Lachmann's influence on his fellow Austrians may be most noticeable.

Lachmann Today – via His Epistemology and His Capital Theory

That being said, continuing work on the implications of Lachmann's insights for modern-day conditions is highlighted by both his views on expectations and the fundamentals of his epistemology as grounded in the individual plan. And Bill Tulloh and his collaborators' work on connections to and applications of the digital age are apt and pregnant with potential. A poignant example being the blockchain technology and its applications. Another is the analogy between software and capital and how this illuminates the nature and role of knowledge in capital (Baetjer 1997, Lewin and Baetjer 2011), most particularly the importance of *modularity* – a digital (or physical) encapsulated capital-combination. (See also Bill's reference to the work of Hernando de Soto and the related literature on property rights and capital in economic development.)

Hernando de Soto

According to Lachmann, time and knowledge belong together in that it is inconceivable that time should pass and people's knowledge should remain the same. We may add that, consequently, knowledge is in effect connected to time. Each moment of time has its unique knowledge configuration (within and among individuals), and this punctuates the problem of coordinating individual actions because knowledge (as distinct from information or data) is subjective. One of the most significant achievements of the complex society is found in the existence of capital-goods (including software) that in effect embody the ready-to-use knowledge of anonymous others. A safety razor "knows how" to shave your face if you know how to hold and move it properly. (Baetjer 1997) That knowledge was purposely put there by painstaking efforts of the designer, who knows all about the angles, materials, connections, etc. that are needed for the resulting effects, but about which we the users need know nothing. It is the epitome of the division of knowledge about which Hayek spoke, but not found solely within an individual mind; rather it is extended by technology and applied by markets in a way that becomes useful to untold millions. Indeed, as Bill suggests, Lachmann's work may be "more relevant than ever."

A BIT MORE ON SUBJECTIVISM

by Hans Eicholz

In this follow-up to Professor Lewin's insightful comments, I would like to address this thing called subjectivism and push a little deeper into the very interesting way Lachmann understood this concept and came to formulate his more complex or radical understanding of it.

The idea of subjectivism has a much older history in economics than even that presented by Emil Kauder in his justly famous history of marginalism. And while many recall Rothbard's enthusiastic appraisal of Kauder's work as revealing an objectivist root in the Aristotelian vein, the reality is quite a bit different for the development of the sort of *complex subjectivism* from which Lachmann's understanding was derived.

Aristotle

Mises certainly understood this other path of subjectivism, which is why he, more than any other student of Menger's work, strove to ensure the transference of the Austrian approach to a neo-Kantian foundation. Rothbard disparaged that approach for reasons already mentioned. For him, Mises was heading down a wrong path, and while Mises certainly saw dangers in historicism, from Rothbard's perspective, he should have done an immediate about-face and returned to Menger's more Catholic-Thomistic roots. For Lachmann, however, Mises's problem was that he had not traveled far enough down the logical implications of that road! Let's have a look at what that direction entails and why it might have produced the characteristic complex subjectivism for which Lachmann is rightly known.

To be thoroughly subjectivist, an orientation must be relentlessly from the perspective of the acting agent under investigation. Presumably in the case of the social sciences, this means human agency, and for early 19th-century German scholarship, that meant looking to the meanings of actions as they were understood by those acting.

Now certainly an idea of purposefulness is contained in the Aristotelianism of Menger. Telos after all was a leitmotif of Aristotle's explanation for the meaning of the good as it relates to the fundamental character of an object in nature, including man. Hume showed how difficult it was to understand that nature, however, and Kant set about to find another way to ensure, first and foremost, confidence in the natural sciences through the *a priori*, nonexperiential aspects of how we can know things. Far trickier was the realm of human actions in either their moral or scientific senses. The best that Kant could come up with was the categorical imperative and a general idea of progress through time. That difficulty in understanding the realm of human action, though, directed scholarly attention to the interiority of the minds of acting persons, to their aims and ideas and the sources of those thoughts.

The economists of the marginal revolution took subjectivism only so far, to what is often said to be the subjectivism of wants or tastes. In Menger's case, it was to accept the notion that there need not be any special weight or objective importance granted to any particular aim, activity, or object but simply to the logical implications that follow from the pursuit of *any* want in the context of scarcity. But is there ever a time when this logic of choice is not enough to understand what is transpiring?

Here was the crossroads, the intersection, at which Mises hesitated. One can see him hesitating around the interesting distinctions between praxeological and catallactic categories. But he left these undeveloped. In a fascinating but brief collection of letters between Lachmann and Mises, held at Grove City College, Lachmann tried to prompt Mises to go further—not to stop with the logical structures of the human mind where Kant had brought us—but to move further down that road to ask about the differences that divergent aims and expectations make to the economic process. In this, Lachmann was working through the implications of a Weberian understanding of the subjective.

Two sides of the Historical School largely represented by Weber on the one hand and Sombart on the other can be seen in the degree to which they believed that individuals could possess the same thought patterns, or to put it in terms favored by Douglass North, the same mental models. Here Sombart was quite adamant that from specific plans (and he used the term) whole new coordinated institutions could come, and from these, whole new economic orders. This was *Volksgeist* of a very robust sort.

Weber followed the lead of the historian Otto Hintze to question the degree to which interpersonal conceptual conformity could be said to characterize the content of our thoughts as individuals. *Some* interpersonal conformity was clearly possible and formed the basis for institutions, but not to the extent envisioned by Sombart. (Weber [1906] 2012. 16, 20) And here Lachmann followed Weber where the latter noted that the aim of interpretive understanding "remains the specific characteristic of the 'subjectivising' sciences, insofar as they are *historical* sciences and not normative disciplines." (Weber [1906] 2012, 57).

AUSTRIAN VERSUS CHICAGO FORMALISM

by Hans Eicholz

Reading Lewin's second follow-up to the Lachmann exchange, I wonder how Austrians will react to this observation: "I was surprised to find in the "other Austrians" views much closer to the neoclassical paradigm than Lachmann's and views apparently devoid of his concerns about the implications of divergent expectations."

> "THIS POINT FITS PERFECTLY WITH LAVOIE'S ASSERTIONS ABOUT THE LOGICAL FORMALISM OF THE AUSTRIANISM OF HIS DAY..."

This point fits perfectly with Lavoie's assertions about the logical formalism of the Austrianism of his day, a point which shocked many Austrians at the time who frequently cited their well-known criticisms of static equilibrium of the neoclassical sort.

To my mind, and I am most definitely not an economist but an historian, one can begin to see just what Lavoie was driving at by examining one of the great debates between Kirzner and that premier Chicagoan, Gary Becker, in their justly famous exchange on the value of the idea of purposefulness in economic analysis.

It seems clear that most people's evaluation of the outcome of that exchange hinges, as Lewin's remark suggests, on their different background assumptions. This is historian's territory, so let's apply a little *Verstehen*.

In his original post, Lewin made this remark that has stayed with me for reasons about which I was not at first entirely clear, but that now, in light of the above quote, seem altogether understandable:

Kirzner asked a simple question: if the existing price and quantity are not market-clearing, how does the market move toward equilibrium? Who makes this happen? And of course the answer is, anyone who sees an advantage in doing so, anyone who sees that the market price is likely too high or too low and acts accordingly, will move the market toward that market-clearing price. There is no guarantee that that market-clearing price is a fixed target. It may be changing. Yet as long as these entrepreneurial actions are successful in creating value for the actors, the price and quantity will move toward market-clearing.

Notice the last sentence. That "market-clearing" price is an abstraction that would not exist in the absence of the subjective valuations of the actors and most especially of the "entrepreneurial actions" involved. That new price comes into being only when the entrepreneur recognizes the wants of persons within an existing set of exchanges and says, "I can do better." What results is a new market. Kizner knows this well, designating that moment as the *entrepreneurial element*.

Yet the abstract concept of the "market clearing" point exists in the mind of economists as an entity in itself, by which they then explain formally "why" actions are adjusted. How difficult it must be, then, to maintain the Lachmannian focus when one's professional inclination is to explain by abstracting from a point *that is presumed by the very terms of analysis to be already out there* rather than reasoning from the interiority of the acting persons involved!

I believe this explains much of what was going on between Becker and Kirzner. To recap that debate, Gary Becker, asserted that purposefulness in any form, whether in its more broadly formulated Misesian variety or the more traditional modes of rational self-interest, is entirely irrelevant to the analysis of markets because of budgetary constraints. Kirzner went to great lengths to contend that such a view leaves out valuable information: "If molecules," he wrote, "acted purposefully, no physicist would dare ignore the information which he could derive *from this very fact*." (Kirzner [1962] 2009, 219)

But most of the profession, including Kirzner, was focused on the formal process of getting to that abstract equilibrium point, and so he made no further headway other than with those who already affirmed the value of purposefulness as a category.

Here is where understanding Lachmann comes in. What would he have said? Well, we actually do not have to go very far to find out. As noted, Lachmann's essay on the significance of Austrianism gives his position clearly. We must dive into the content of purposes, in this case, entrepreneurial *plans*.

The value of purposefulness is not in its categorical form. If that were all, the efficacy of the concept would be pretty meager, and Becker would win simply on the ground that purposes of any kind are superfluous to the running of his formulas. The key is to recognize the subjectivism of Kirzner's entrepreneurial element through the actual, and one might add, historical, creation of *new* markets, which is what actually occurs in real life.

Israel Kirzner

It is when an entrepreneur recognizes a consumer want or a perceived need and a means to fulfill that desire (i.e., that a want can be satisfied in another way via cost savings or technical innovation) that all the action of specific purposes and their importance come into focus. Becker's formalism is helpless to explain such innovation in either its Schumpeterian or Kirznerian forms. In the Chicago mode, entrepreneurship is just baked into the cake. It just happens.

For most social scientists, and I would hope most economists, that sort of crude tautology could never amount to much of an explanation of anything. At best, it might give us a way of understanding exogenous changes to specific resource inputs of a given, fairly stagnant, and already existing market. But what does it tell us about the creation of anything really new? Exactly nothing.

It is here that Lachmann's perspective ultimately rescues one of the central tenets of Austrianism, and it is why his work must continue to hold the attention of economists in general.

EXPECTATIONS AND PREDICTABILITY

by Mario J. Rizzo

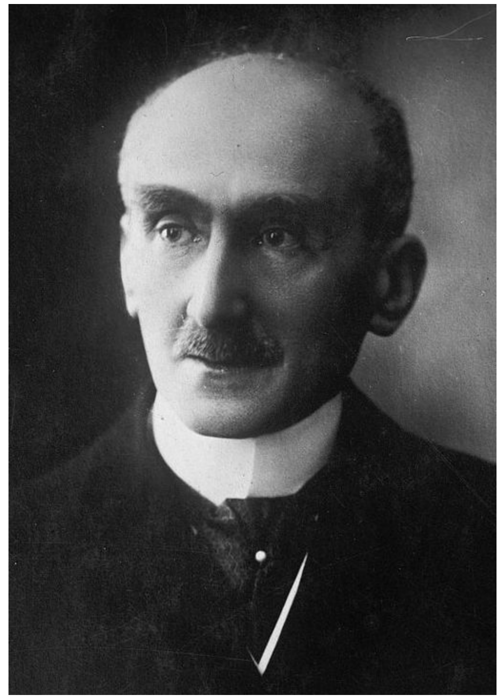
Peter Lewin raises an excellent point when he says that it is important to specify the content of expectations. "[W]e should ask: expectations of what?" (Lewin, "Thoughts on Equilibrium…"). At the most general level, economic agents are concerned with institutions of one sort or another and with the market behavior of other agents.

1. What is the certainty of institutions? This is a complex subject but it is necessary to dispel some misconceptions. We are not or should not be thinking of fixed rules so much as hierarchies of rules with some degree of fixity or permanence. A clear example can be found in the traditional common law of negligence. Consider:

> A unintentionally hits B.
> A is liable if A is negligent, otherwise not.
> If A is negligent but B is also negligent, then A is not liable.
> But if A had the "last, clear chance" of stopping the accident despite B's negligence, then A is liable.

We could continue this progression and we could find other such progressions in other areas. There is no single fixed rule if by that we mean that any one of the above propositions is dispositive no matter what the circumstances. What is relatively fixed is the hierarchy or the stages of the pleading. This hierarchy has the advantage of being adaptable but in a systematic way to the emergence of new facts.

2. The market behavior of other agents. We know that consumers do not always behave unpredictably. The aggregate demand for orange juice is stable over significant periods of time. In other cases, even with the development of new products, the implicit demand for certain attributes is fairly constant so that manufacturers will know, within some limits, what the demand will be for a small alteration in the product they have been selling.



Henri Bergson

It is important in this discussion to make clear that, for example, neither Henri Bergson (nor Alfred North Whitehead nor William James) thought that every human decision was a totally free, creative and unpredictable act. Lachmann may not have been clear on this. We should be.

Events can be broken down into many aspects and so too can predictions of events. People will buy orange juice but they may shift unexpectedly to pulp heavy from no pulp. People may buy the new i-Phone but may unexpectedly complain about a new feature thereby conveying information to manufacturers. Even with respect to the law, subtle changes may enter into the assignment of liability. For example, small negligence on the part of victims may be ignored and recovery allowed.

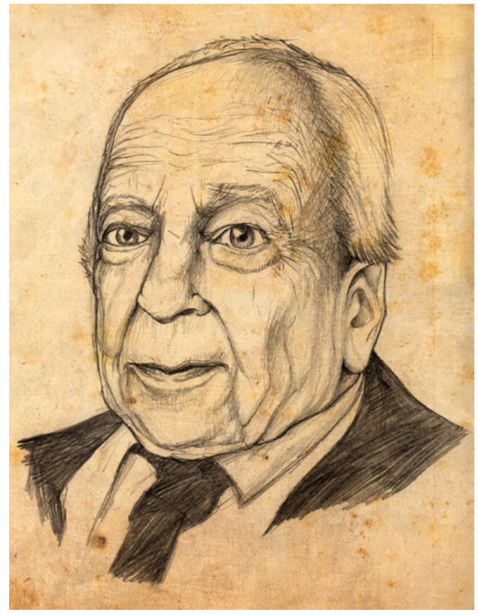
And yet, of course, those big unpredictabilities may dominate – sometimes due to endogenous cascades of errors or to uncertainty generated by bad policy decisions. The latter may be unpredictable decisions by what Roger Koppl has called "big players." They may also be accommodative interest-rate policies that encourage people to take on unreasonable risks.

The key to understanding what is going on is, of course, empirical evidence. This is what Lachmann was arguing for when he said that there are different kinds of markets. There are also given markets under different circumstances. Thus, there is no easy *a priori* way to determine how markets will function at the level of even intermediate detail. We cannot say, for example, that the market process will *never* exacerbate the errors entrepreneurs make. We may or may not doubt that this is the case in a particular situation but we will have to adduce evidence. We may have our presumptions but Lachmann's message is to go beyond that.

LACHMANN AND HIS FOLLOWERS ON THE NATURE OF SUBJECTIVISM: FROM METHOD TO ONTOLOGY, AND THE CATALYSIS OF EMPIRICAL WORK

by P.A. Lewis

I'd like to elaborate on an interesting and insightful remark made by Peter Lewin in his post "Understanding Lachmann Heterogeneously" and connect it to a theme raised by Hans Eicholz, namely, the nature of subjectivism. Lewin refers to "Don Lavoie, whose view of Lachmann was much more extensively based on his understanding of continental philosophy." Lewin is referring here, I think, to the way in which Lavoie interpreted Lachmann's work through the lens provided by philosophical hermeneutics, perhaps most notably the work of Hans-Georg Gadamer ([1975] 1993), in order to develop a distinctive—and, I shall argue, extremely fruitful—interpretation of the nature of subjectivism.



Hans-Georg Gadamer

In essence, what Lavoie was trying to do was to encourage people to re-conceptualize subjectivism. The traditional conception of subjectivism, or *verstehen*, that informed the human sciences in the late 19th and early 20th centuries was as a specialized social scientific method that hinged on the ability of expert scholars empathetically to grasp the meanings people attributed to their circumstances and actions. In contrast, philosophical hermeneutics suggested that interpretive understanding is something that normal people accomplish with considerable success in everyday life. On this latter view, rather than being thought of in epistemic terms as a technique for studying human activity that is the exclusive preserve of specialist social scientists, *verstehen* is understood ontologically as an account of human nature; people are interpretive beings, who manage to understand one another very well in their everyday lives even without specialist training. (Lavoie 1991, 1994a, 1994b: 59-60; also see Prychitko 1994: 311-12 and Lewis 2011) The reason they are able to do so harks back to a point made by Lachmann in *The Legacy of Max Weber* and highlighted in my first contribution to this discussion, namely, that people are social beings whose interpretations of the world are shaped by shared social rules. And it is the fact that the inhabitants of a given society typically interpret the world using the same—or, at least, very similar—interpretive frameworks that makes it so easy for them to understand one another so much of the time.

The interpretation of subjectivism developed by Lavoie has had another important implication, which has turned out to be significant for recent work in Austrian economics, for it suggests that meaning, rather than being hidden in people's minds, to be identified only through mysterious acts of empathy, is in fact publicly accessible (though observations of people's actions, archival documents, etc.). This line of thinking encouraged—and was explicitly designed to encourage—Austrians to do empirical work and has led to a stream of fine qualitative studies that explore how the shared interpretive rules and patterns of meaning, or "culture," within which people are embedded affect their behaviour in both market and nonmarket settings, thereby shaping the kinds of outcomes that emerge. (See, for example, Chamlee-Wright 2002, 2011; Chamlee-Wright and Storr 2009, 2011; Storr 2004.) In this way, as a very interesting recent essay has suggested, Lachmann has exerted considerable—albeit, one might add, sometimes indirect—influence over applied work in contemporary Austrian economics. (Storr 2018).

IN LIGHT OF HERMENEUTICS, WHICH WAY FOR AUSTRIAN ECONOMICS?

by Hans Eicholz

Professor Lewis's reference to Lavoie's interest in Hans-Georg Gadamer is a very significant observation and draws attention to what should be a major point of decision for Austrian economics. It is true that *verstehen* has roots in both historical and philosophical circles. But along which path should Austrian economics travel?

The idea of *verstehen* grew out of much earlier textual interpretive techniques, as Professor Lewis indicated, and was first employed by biblical and classical scholars. It was from these origins that it spread to law and history. Wilhelm Roscher himself had studied, in part, with Leopold von Ranke, was interested in Friedrich Carl von Savigny's work in the law, and was himself originally a scholar of Greek antiquity. In this context, the notion of empathy was not anything particularly mysterious. It was a faculty to be cultivated by long study and application to texts and even intertextual comparisons.

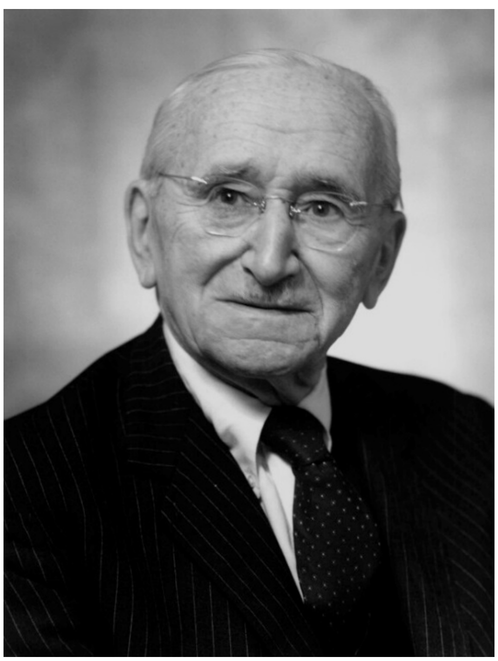
Wilhelm Roscher

Max Weber took it upon himself to set this whole approach on a more conceptually and, by his lights, scientifically rigorous foundation. It seems clear to me that Lachmann favored this more workaday approach to interpretive understanding over the more highfalutin tradition out of which Gadamer was coming, but this would be an interesting subject for further investigation: in which direction should the concept be taken now?

LACHMANN'S LEGACY

by Peter Lewin

Friedrich Hayek famously said that "nobody can be a great economist who is only an economist—and I am even tempted to add that the economist who is only an economist is likely to become a nuisance if not a positive danger." Lachmann would certainly agree, and he personified that sentiment. His depth and range of matters historical, philosophical, sociological, and cultural were beyond impressive. Yet, unlike Hayek, he was never well-known, in spite of his many connections to the luminaries of the profession at the time. Some of these connections date from the LSE period when he was in a cohort with many future big names, including, most notably, John Hicks, whose work remained an inspiration to him throughout his life. (Not so well known is Lachmann's lesser but nevertheless influence on Hicks's thinking on capital.)



Friedrich von Hayek

After his death, Lachmann's name is perhaps no better known among economists in general than it was during his life. But his influence among Austrians is certainly strong and shows no signs of diminishing. This influence operates at both the conscious and unconscious levels. Modern Austrian economists unconsciously accept certain Lachmannian presumptions, and others very deliberately try to apply his insights. So much is indicated by the contributions to this discussion from the methodology of intersubjective understanding and interpretation: from Eichholz -- who helpfully and expertly places it in historical and conceptual context following Lewis's explanation of how the notion of *verstehen* was broadened by Lavoie and led to a particular understanding of what constitutes "normal science" in Austrian economics -- to Rizzo's extensive, often very specific applications of Lachmann's open-ended universe within evolving legal and other institutions, to the (so far the least-developed) implications of his capital-theory in the field of information technology (Tulloh).

Related to the last mentioned, noted by Lewis, is the discovery of Lachmann by scholars in the field of management studies. Some years ago the management field embraced the insights of Israel Kirzner on entrepreneurship in a rather curious way. While enthusiastic about the prominence that Kirzner bestowed upon the entrepreneur as the "discoverer" of opportunities for innovation and profit (see Shane 2000, 2008 and Shane and Venkataraman 2000), they gradually became aware that Kirzner's entrepreneur was a rather limited and ephemeral figure. In fact, much work citing Kirzner used a notion of the entrepreneur which Kirzner himself (in his inevitably amiable way) disavowed. His entrepreneur was not a business manager or financier, he was rather an alert character who perceived an arbitrage opportunity that was hitherto unnoticed. Once noticed, the entrepreneurial function was over. This was "pure entrepreneurship."

By contrast, Lachmann's entrepreneur, in his capital theory and in his "market as an economic process" work, was a real-life human being (a "real type"?) who was responsible for not only "seeing" an opportunity but also for putting together and managing the necessary (heterogeneous) resource combinations to bring the opportunity to fruition in the form of profits. In doing so he necessarily exercised his capacities for judgment and estimation (calculation). This is most fully spelled out in

Lachmann (1986) where he investigates knowledge, expectations, calculation, and related themes in different types of markets and situations.

So it is not surprising that, in a way extending from their examination of Kirzner, management scholars in turn discovered Lachmann and found his views much more congenial to understanding management in the dynamic world they sought to investigate. Some Austrians (notably Klein 2008, and Foss and Klein 2012) were also involved in this. Perhaps the most illuminating starting point into this literature is the article by Richard Langlois (2013). See also the reference in Lewin 2015.

How far one can go with this remains to be seen. Lachmann, more than anyone, would affirm the conclusion that when it comes to entrepreneurship in an uncertain world, there are no formulas for success, no silver bullets. But there are in his work many interesting insights that may be of help to the scholar and practitioner in understanding her environment.

LACHMANN ON FUNDAMENTAL AND SECONDARY INSTITUTIONS

by Bill Tulloh

Lachmann's theory of institutions deserves more attention; it represents *his* attempt to solve the "Lachmann problem." Unfortunately, his meaning is obscure. Yet, as Lewin points out, our effort (Tulloh and Miller 2006) to clarify the meaning also requires further clarification.

Lachmann ([1950] 1977, 169) points to continuity of the social environment as a basis for plan coordination. He later (1971, 50) identifies institutions as the source of this continuity. But this creates a new problem: how does the institutional order maintains its coherence in the face of change? He proposes a distinction between "frequently mutable" secondary institutions and "almost immutable" fundamental institutions. Fundamental institutions are the rules of property and contract: "a market economy may adjust itself to changes of many kinds, but it rests unconditionally on the institutions of property and contract." (1971, 90) Secondary institutions "gradually evolve as a result of market processes and other forms of spontaneous individual action." (1971, 81)

Lachmann seems to be groping for the right words. He first distinguishes between external and internal institutions before shifting to fundamental and secondary. Secondary institutions are referred to in terms of "nodal points," "interstices," and "orientation schemes of the second order." Interestingly, software developers have developed a set of concepts to think about distinctions of this sort.

Programmers distinguish between two dimensions of abstraction -- abstraction layers (horizontal) and abstraction boundaries (vertical). Programming languages abstract from the details of the physical machine creating a layer where programmers can reason about the behavior of entities in terms of the rules of logic. Similarly, fundamental institutions abstract from the particular circumstances of time and place creating a layer of abstraction where actors can reason about the actions of others in terms of the rules of property and contract.

But what does it mean to say that secondary institutions create abstraction boundaries? Lachmann gives us a clue with "interstices" -- the space between two objects. In software, objects at the same layer of abstraction are separated by interfaces through which they interact. Lachmann recognizes that in a world of social cooperation based on specialization, most of the means we need to achieve our ends are controlled by others. The interface connects separately controlled means with separately defined ends. Agents don't plan based on the concrete means and ends of others but according to the abstract interfaces existing between them.

Let's compare a specific and abstract relationship. Claire wants to send a birthday card to her mom. Not being able to deliver it herself, she hopes to find someone who can. It turns out that Paul specializes in delivering birthday cards from Claire to Claire's mother. If they meet somehow, the plans are coordinated. Claire's purpose of sending her mom a birthday card is fulfilled by Paul's plan of delivering birthday cards from Claire to Claire's mom. But this relation is brittle; coordination only occurs in a specific circumstance. A slight variation and both plans fail. If Claire wants to send a birthday card to her sister, or if Paul only delivers birthday cards to Alice's mother, they are out of luck.

Abstraction overcomes this brittleness. The interface of posting a letter generalizes from the specifics circumstances of Claire: Birthday Card -- Claire's Mom, to an abstract interface: [Sender] – [Envelope] – [Address]. A post office will deliver any letter from anyone to any address. By creating an abstract interface rather than a specific one, a greater range of plans can be coordinated (including many not yet foreseen).

Note that the greater flexibility applies to both sides: the boundary coordinates a greater range of plans for sending letters and a greater range of plans for delivering them. We can now make sense of Lachmann when he writes "One is tempted to think of the institutional order as of an array of hinges: the institutions within each hinge can move a good deal, if within limits, but the hinges themselves cannot." (1979, 72)

I can now explain my discomfort with viewing Lachmann's institutions as rules of the game. Fundamental institutions define the rules of the game for actors at a level of abstraction. While it is possible to think of the interface as defining the rules for "the game of posting a letter," I think this obscures the role of abstraction in coordinating plans between actors. Lachmann's great insight was to recognize that this process of creating secondary institutions is a crucial part of the market process; the creation of abstract interfaces is an endogenous part of the interplay between entrepreneurs and their customers.

HERMENEUTICS: A CLARIFICATION

by Hans Eicholz

Lest my last comment be thought a bit too opaque, I believe Roger Koppl's comment "No Methodological Holds Barred" on Peter Boettke's essay, "Hayek's Epistemic Economics," in a Liberty Matters conversation last year bears directly on this point about Austrian hermeneutics at the crossroads. Koppl wrote:

This is not the place to express my dissatisfaction with the "universal hermeneutics of Heidegger and his followers. I will merely record my opinion that Alfred Schutz has given us the best available account of "understanding" in the classical hermeneutic tradition.

Schutz was part of that more workaday approach to *verstehen* to my way of thinking.

LACHMANN WAS A HAYEKIAN

by Bill Tulloh

I would like to elaborate on what it means to say Lachmann was a Hayekian. My earlier comments were unclear, which caused Peter Lewin to misunderstand me.

My point was not, as Peter writes, that Lachmann's "attention to the divergence of expectations (provoked by Hayek's 'Economics and Knowledge') came later and that this matter was, in some important sense, derivative of Lachmann's more fundamental subjectivism based in both Menger and Weber and related works." Rather it is that Lachmann's more fundamental subjectivism based primarily on Mises and Weber was provoked by Hayek's

"Economics and Knowledge" (and the larger context from which it sprang), leading to rich story of intertemporal plan coordination of which divergent expectations were an integral part, but not the whole story.

Friedrich von Hayek

So, I agree that the "expectations story" has had the most noticeable influence on his fellow Austrians. However, I believe this is a "thin" reading of Lachmann's contributions which has often resulted in a facile lumping together of Lachmann and Shackle.

Partly, I want to fill what I believe is a lacuna in the usual presentation of Lachmann's intellectual trajectory. Peter, in his lead essay, quotes from Mittermaier's informative biographical sketch of Lachmann. Mittermaier (1992, 9) notes that Lachmann was already a Hayekian upon his arrival at LSE. However, he goes on to explain that "being a Hayekian" had a narrower meaning back then -- referring to Austrian capital and trade-cycle theory. Similarly, Walter Grinder in his masterful overview of Lachmann's work (1977, 8) writes that by the time Lachmann arrived at LSE, his "basic theoretical formulation, with the possible exception of the role of changing expectations in economic life, had been worked out."

While I think there is truth in both of these claims, I also think they obscure the important impact that Lachmann's time at LSE had on his thinking. What they miss is that his (and Hayek's) work on capital, trade cycle, and expectations occurred as part of a broader debate over intertemporal equilibrium. This debate raised fundamental questions about the relationship between knowledge and time, what Giocoli (2003) calls the "escape from perfect foresight." I think this explains Lachmann's later, frequent references to Hicks, Shackle, and the post-Keynesians. It was not that they had the right answers, but that they were the only ones still asking the right questions – questions about time and ignorance.

My claim is that Hayek's reframing of this debate in terms of plan coordination and incomplete knowledge influenced Lachmann greatly, and most of his subsequent work can be seen as wrestling with the implications of this perspective. This, of course, does not mean that Lachmann agreed in all particulars with Hayek, but rather that the research program Lachmann pursued was very much a Hayekian one. For example, Lachmann ([1951] 1977, 101), in his review of *Human Action*, criticizes Mises in a way that echoes Hayek's criticism of Mises in "Economics and Knowledge": "if the transformation of knowledge is an essential element in the market process, then the latter cannot belong to the province of logical economics, for the acquisition of knowledge is not a logical process."

Yet Lachmann saw in the work of Mises and Weber a way out of this dilemma. While Lachmann knew of their work from his days in Berlin, it was only after his move to Johannesburg that he studied their work closely. And it was Mises with whom he always claimed to have the greatest philosophical affinity. It was Mises's subjective approach to means and ends (shared with Weber) and his view of the market as a process that Lachmann saw as the most fruitful avenues for advancement. His emphasis on "plans" and "real types" were an attempt to integrate the empirical with the logical.

So, yes, divergent expectations matter, but this is part of a larger story of knowledge transmission and intertemporal plan coordination, a story shared with

Hayek. Hayek emphasized more the spatial challenges to plan coordination posed by dispersed knowledge. Lachmann emphasized more the temporal challenges to plan coordination posed by the unknown future. Both aspects matter.

MORE THAN INSTITUTIONS

by Mario J. Rizzo

I have been following the posts with interest. I am not sure I really have much to add. But I do want to say something about institutions and expectations. If we take a very broad view of what an institution is, we run the danger of calling every regular course of action an "institution." Clearly, we do not want to do that. If Mary goes to the butcher every week and orders beef, pork, and lamb, is she an "institution?" Hardly. If we define institutions narrowly, then law and perhaps strong mores are included. "Secondary" institutions might be those entities or ways of behaving that are built on the "primary." For example, people create mechanism to fund retirement – like the 401(k) programs which are made possible by the provision of the IRS code after which the program is named.

But intertemporal equilibrium – or perhaps better – the avoidance of intertemporal breakdown requires more than that. If there is a sudden increase in the demand for money and shifting of government expenditure priorities because people fear the oncoming of a war, many entrepreneurs will have produced the wrong things at the wrong prices. Perhaps no one was in the position to predict that. But at other times, a new financial product might have been invented which was thought to have little risk. But the ugly extreme tail in the distribution manifested itself and the financial system is damaged. Perhaps no one could have predicted that.

Now it perfectly right to ask, especially in the second case, if monetary policy made things worse and caused greater financial panic than otherwise. Perhaps so. But we ought to keep in mind that these disruptive and unpredictable events can happen. I doubt if even the best institutions can prevent all of the discoordinating effects. So intertemporal equilibrium, even if achievable in a rough sense, is still brittle with respect to unusual events.

In large part this explains why Lachmann was insistent that we need a "lender of last resort." Some institution to help bail us out when all other institutions have failed. Whether a competitive banking system has the ability to do this, I do not know. Perhaps it needs a J.P. Morgan to coordinate matters.

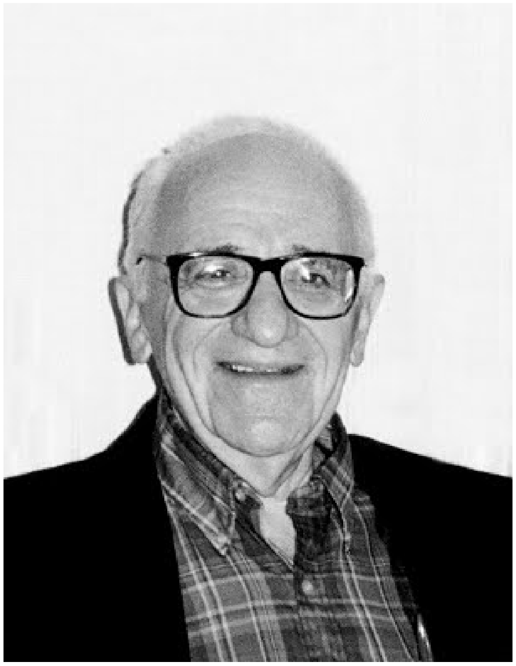
LACHMANN AND MISES

by Hans Eicholz

> "And it was Mises with whom he always claimed to have the greatest philosophical affinity. It was Mises's subjective approach to means and ends (shared with Weber) and his view of the market as a process that Lachmann saw as the most fruitful avenues for advancement."

Bill Tulloh raises some really critical points in his comments. If only there were time to take them all up. But in the above quote my attention is riveted on the word "affinity."

How did Lachmann see his relationship with Mises? I would say it was much like his appreciation of Shackle, Hicks, and Keynes, but in the other direction. Where he liked these thinkers for their questions, as Tulloh notes—for their relentless interrogation of the inconsistencies of individual plans--he appreciated Mises for his relentless application of purposefulness, of the ends/means relationship, to economic processes.



Ludwig von Mises

Indeed, besides Mises, few other economists have made more of this concept *purposefulness*. It is no wonder, then, that Lachmann would see the natural affinity of Mises with Weber, even where the former would not!

Throughout his writings Mises remained rigorously logical in his derivations from the category of purposeful human action, so much so that he ran his praxeological categories straight through his catallactic ones. It is why he could not ultimately accept the hermeneutical definition of *understanding*.

With but slight modification of Weber's *verstehen*, however, Lachmann found Mises's theoretical articulations to be an analytically target-rich environment!

EQUILIBRIUM AND INSTITUTIONS

by Hans Eicholz

Mario Rizzo has raised something very interesting with respect to equilibrium and institutions, a theme that first got my attention when I recently read Lachmann's final response to Larry White in the Fall 1979 *Austrian Economics Newsletter*, "On the Recent Controversy Concerning Equilibration".

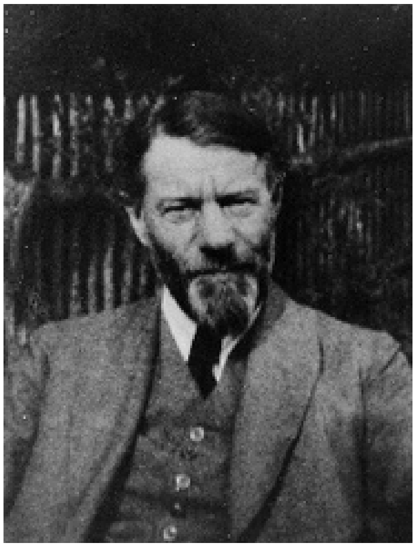
It's worth a look, especially for how Lachmann raises the example of U.S. railroads in 1900 and the coordination of plans.

TULLOH ON EXPECTATIONS AND INSTITUTIONS

by Peter Lewin

I found Bill Tulloh's most recent two posts very interesting, informative, and provocative of where future work on Lachmann might go.

The application of Lachmann's work on institutions in computer science is, as I suspected, fascinating. The example that Bill provides is very helpful, evocative of Lachmann's own reference to the post office as an institution and the mailman as a "real type." The example of Claire using a third party, abstracted by degree, to mail her birthday card to her mother is very helpful. In general, I feel that this type of discussion could benefit from many more examples to focus the mind. I begin also to see the relationship between abstraction and modularization that Bill and I have talked about. I urge Austrian scholars to pursue more of this. Lachmann would be delighted.



Max Weber

On the relation of Lachmann's work on expectations to his work on methodology and institutions, Bill sees the timeline this way: Hayek's "Economics and Knowledge" provoked Lachmann's work connecting Weber and Mises; in other words, Hayek's identification of the centrality of inconsistent plans made Lachmann aware of the importance of disparate expectations.

I would guess Bill, who reads German, is in a better position than I to have an opinion on this. So I am willing at least to suspend judgment. I confess I had always seen it the other way – that Lachmann came to the LSE already familiar with Weber and proceeded after the LSE to rekindle that spark and integrate it into what he had learnt. But Bill may well be correct that I need to change my mind about this.

It is certainly true that the 1930s at the LSE were years of frenetic research on business cycles, and that this included examining individual plans and decisions often within a capital-theoretic context. The whole Hayekian "stable" appears to have participated in this research, including representatives in Italy. Bill, Giampaolo Garzarelli, and I have written a short paper on an article published in Italian by Lachmann and one N. M. Neuman in 1934, an expatriate Polish scholar at the LSE, discussing the contributions of two Italian scholars on their variations of the Austrian business-cycle story. Hayek referred to this research in a couple of articles in 1934 and 1935. Our interpretation, from that joint article, is indeed that Lachmann at that stage had not yet formulated his theory of capital but was in the process of doing so. So there are certainly interesting history-of-thought questions to be answered.

I want to turn to the question of Lachmann's theory of institutions. I feel like this part of his work, most fully developed in his 1971 book, *The Legacy of Max Weber*, is unlikely to be the object of much further attention. I may be wrong about this, but it seems to me that those studying Austrian economics look mostly to Hayek on this and his extensive work on institutions. Hayek sees institutions as phenomena resulting from complex processes of cultural evolution. Though I am not aware that Lachmann is anywhere on the record about this, I have heard from at least two sources (Karl Mittermaier and a letter Lachmann wrote to Don Lavoie) that Lachmann was not enamored of Hayek's work from the 1940s onwards on methodology and institutions. This may or may not be true, but it is curious that he never (as far as I know) explicitly referred to this work of Hayek's either positively or negatively. Is it not surprising that neither of the essays that deal with institutions in Lachmann's book on Weber has a single reference to or even a mention of Hayek? By that time Hayek had already written *The Constitution of Liberty* and many other works dealing with the evolution of institutions. One might even imagine, given the very few times he uses the word, that Lachmann was at pains to avoid using the concept *evolution*, though it is clearly implicit in his account.

As I interpret him, Lachmann agrees broadly with Menger's distinction between designed and undesigned institutions (and connects this to aspects of Weber's work), but suggests very strongly that no designed institution is ever devoid of undesigned elements in a changing world. And though he spends a lot of time discussing the origins of institutions and even identifies a type of "institutional entrepreneur" (my term not his) as a necessary ingredient (though this is not clear), there seems to be a lot of spontaneous development going on. Why not a single reference to Hayek?

SOME FINAL THOUGHTS ON SECONDARY INSTITUTIONS

by Bill Tulloh

Lachmann's distinction between fundamental and secondary institutions seems like a potentially fruitful approach to reconciling important issues that arise when moving towards a "looser" conception of plan coordination that can better cope with uncertainty. (O'Driscoll and Rizzo 1985, Lewin 2016) So I will take another stab at distinguishing between the rule-like nature of Lachmann's fundamental institutions and the "abstract interface" nature of Lachmann's secondary institutions.

Professor Rizzo raises an important point by noting that "we … should not be thinking of fixed rules so much as hierarchies of rules." (Comment: "Expectations and Predictability") This concept of default hierarchies of rules (Holland et al. 1986, Rizzo 1999, Whitman 2009) provides a way to make sense of Lachmann's discussion of the "gapless" nature of the legal order. But as Lachmann points out, this does not apply to all institutions: "The legal order abhors a vacuum no less than nature does. In the wider institutional sphere, we find no parallel to this characteristic. Some institutions will be complementary to one another in that they require each other's services, like Post Office and railways or airlines." (1971, 77)

Whether or not we want to call these "institutions," the distinction Lachmann makes is important. He is drawing our attention to the abstract interface that enables complementary services to connect. In essence he is directing our attention to the division of knowledge. As Lachmann (1971, 50) writes, "We know enough to make it serve our ends, though we may know next to nothing about the internal working order of these institutions."

The abstract interface is the divide. It enables us to make use of the knowledge of others without having to know it ourselves; we specify what we want but not how to do it. We can think of this as the modularization of knowledge. The abstract interface between modules matters because we need to combine these productively as circumstances change.

Modularity and abstraction bundle together several closely related concepts – information-hiding, encapsulation, interface, and types – which play important roles in plan coordination. Encapsulation ensures that the means under my control are not interfered with by others. Information-hiding ensures that my plans don't depend on the details of the means under the control of others. Interfaces are the abstract aspects that we can both rely on. Abstract interfaces also enable us to distinguish the typical from the unique.

The interface defines a type. It defines what instances are members of this type (abstracting from the unique aspects that do not matter for this purpose), and it distinguishes this type of thing from all other things. The type helps us know when our expectations will be valid. We expect certain behavior from this type of thing.

There is an interesting tradeoff here. We need enough knowledge of the actions of others to coordinate our plans; but too much knowledge limits our ability to cope with unexpected change. One way to think of this is in terms of "possible worlds" and Hayek's "adaptation to the unknown." Adaptiveness comes from being able to cope with multiple possible worlds; coordination comes from agreement on which of the possible worlds we are in. More knowledge means fewer possibilities we need to consider, thus making it easier to coordinate. But relying on too-detailed knowledge means there are fewer possible worlds in which we can coordinate. Abstract interfaces seek to balance the knowledge needed to coordinate while keeping maximum responsiveness to unforeseen possibilities.

This reading of Lachmann suggests a possible reconciliation with the work of Alfred Schutz, whose discussion of types and degrees of anonymity (Schutz 1967) explores similar themes. It also connects to Don Lavoie's work (Lavoie 1991) to reconceptualize subjectivism, as highlighted by Professor Lewis (Comment: "Lachmann and his Followers on the Nature of Subjectivism"). Expectations are as much a question of institutions (fundamental and secondary) as they are of individual decisions.

I will close by noting a certain discomfort with Hans Eicholz's characterization that one must make a choice between "highfalutin" Gadamer and "workaday" Schutz. The metaphor of a crossroads does not seem apt. One can learn much, as did Lavoie, from both roads (from their similarities and their differences).

LACHMANN: STILL A PUZZLE

by Bill Tulloh

When comparing the works of great thinkers, one can choose to emphasize their differences or their similarities. Clearly, Lachmann had many differences with both Mises and Hayek, but many similarities as well. Questions of influence are even more fraught with difficulties, and ultimately, we must content ourselves with not being able to achieve definitive answers.

I have always found Lachmann's work particularly puzzling. Given how often my own interpretation of his work has changed, I would be the last person to suggest that there is anything like a correct interpretation of his work. As I dig deeper into his work, it continues to surprise me.

For example, it was only recently that I became aware of his involvement in the interwar debates in Germany on constitutional law, involving Hans Kelsen, Herman Heller, Carl Schmitt, and Rudolf Smend. This included writing about Smend, Schmitt and Heller in his dissertation and other works, and participating in Carl Schmitt's seminar in Berlin shortly before Lachmann was forced to leave Germany. This background has given me a new perspective on the "On Politics" chapter in *The Legacy of Max Weber*.

Similarly, it was only after Hans Eicholz persuaded me to pay more attention to Werner Sombart's book on economic methodology, *Die drei Nationalökonomien*, which was written while Lachmann was his student, that I was able to make sense of a puzzling introductory section in

Lachmann's article (1937) "Uncertainty and Liquidity Preference."

I still think the differences that Lachmann had with Hayek have been overdrawn. Lachmann was clearly unwilling to follow Hayek into complex systems and evolutionary theory, but this was later in Hayek's career, not "from the 1940s." In correspondence, Lachmann shows great excitement for Hayek's work in the 1950s and 1960s. He was especially excited about Hayek's *Constitution of Liberty*, and his unfinished, *New Look at Economic Theory*. Lachmann also in their correspondence explained his work on the *Legacy of Max Weber* to Hayek.

Lachmann published two work's that dealt explicitly with Hayek's *Law, Legislation and Liberty*. A 1980 review of volume three in the *Journal of Economic Literature*, and in his 1979 essay, "The Flow of Legislation and the Permanence of the Legal Order." While perhaps coincidental, it is interesting that Lachmann's early paper on institutions, (1963) "Wirtschaftsordung und wirtschaftliche Institutionen," was published in the University of Freiburg journal, *Ordo*, shortly after Hayek moved there.

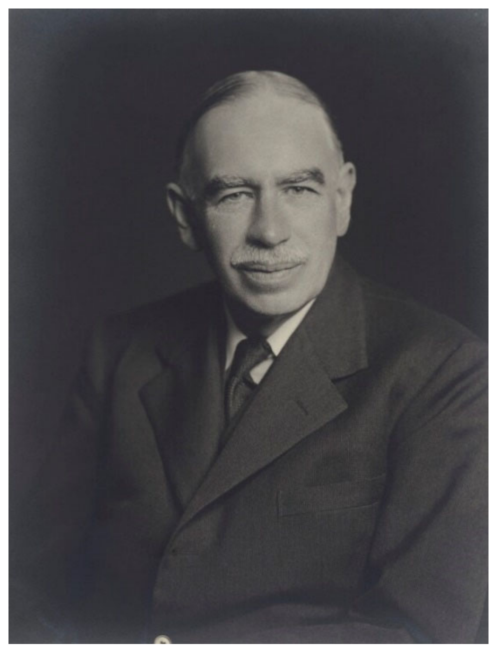
I will close with an excerpt from an interview that Lachmann gave on July 17, 1974 for the Institute for Humane Studies, which is available at the Hoover archives. This was Lachmann's response when asked about his impressions of and relations to Mises and Hayek:

> "I know Hayek better than Mises. He was my supervisor for the Ms. Com., and I have kept in close contact with him ever since.
>
> Mises, I only met three or four times. His work has strongly influenced me, *Human Action* has greatly influenced me. As regards the philosophical basis of economics, I think I feel nearer to Mises than to anybody else.
>
> I owe Hayek most of my economic ideas to him and that my work as an economist has been most strongly influenced by him than anyone else. I also entirely subscribe to his political views. I do think that his *Constitution of Liberty* is one of the great books of our time."

LACHMANN, UNIONS, AND AUSTRIAN-BUSINESS CYCLE THEORY

by Peter Lewin

Lachmann's lifetime output was quite modest. As Don Lavoie noted, there were big messages contained in small packages. Bill Tulloh's post "Some Final Thoughts on Secondary Institutions" is an illustration of how big the message can be. Fascinating stuff, with tremendous relevance to our modern information society, that makes me wish for more. I'm hoping that Bill will provide it somewhere with numerous illustrative examples.



John Maynard Keynes

I am glad Mario Rizzo mentioned monetary policy and intertemporal equilibrium. At least since Mises, the Austrians have always been very preoccupied with intertemporal disequilibrium, especially the kind that gives rise to cycles. It is from this preoccupation that much of their investigations into the role of knowledge in market processes comes from. Hayek's "Economics and Knowledge" arises directly out of questions about expectations in an uncertain world, the kind of world that Keynes suggested rendered the market economy vulnerable and prone to severe collapse.

As Mario points out, on the matter of monetary policy, Lachmann supported enlightened central banking (my words). The little he said about free banking (competition in money supply) was critical and dismissive. Perhaps even more interesting, like Hayek he was focused on the power of labor unions. This is not surprising given the development in Britain of trade-union power – both he and Hayek were still much focused on Britain at that time. Lachmann believed that because of the unions' power, in the world in which we now live prices can go up but not down. He endorsed John Hicks's observation that we were in effect on a "labor-standard." The negotiated wage determined the level of the supply of money. So he was convinced that money was determined "endogenously" and, obviously, for that reason not very impressed by monetarism when it arrived.

It is clear, and it became clear during his lifetime, that he was wrong about this. The power of unions has pretty much decreased monotonically since mid-20th century (for reasons that would be interesting to discuss but are beyond our scope here), and many prices certainly do fall, some of them a lot. Even wages fall as people become unemployed and accept lower-paying jobs.

Lachmann's own framework is useful in analyzing this. Again from Hicks, he uses the important distinction between fix-price and flex-price situations. A demand-side shock can produce either and both in varying degrees over time. The stability of the system depends on there being enough flex-price response. A rigid fix-price situation is the one Keynes assumed. In his world all responses were in quantities of goods and employment. Lachmann realized that the ability of the system to adjust depended on there being enough price responsiveness so that Keynes's income-employment multiplier would be muted. He was interested always to examine every situation for the mix of fix- and flex-price.

Lachmann never bought into the claims of the Austrian business-cycle theory (ABCT). He was steadfastly, if quietly, critical of them. The most obvious case is his brief and only interaction with Mises in the pages of *Economica*. His article "The Role of Expectations in Economics as a Social Science" (1943) was taken by Mises to be directed at him, specifically at the ABCT for assuming static expectations. But of course that criticism would apply equally to Hayek's version of the theory. In any case, Mises felt compelled to respond to the criticism in a note in *Economica*. (1943)

Right at the very end of "Role" Lachmann tackles the nature of expectations within the ABCT. He points out, as was was pointed out many times after him, that for a business cycle to occur as a result of the credit expansion which reduces the interest rate, expectations must be elastic. In other words, investors must expect that the new interest rate will endure sufficiently long for them to want to change their investment decisions. By contrast, if investors know the ABCT and believe it, they will expect the interest rate to be unsustainably low and will not alter their investments in the manner suggested by the theory. It is clear from his words that Lachmann is skeptical about the ABCT.

In his response Mises says that Lachmann's article "deserves careful attention" and that he fully agrees with him. (Mises 1943, 251) He goes on to say:

> But I want to point out that I did not fail to state the fact that my explanation of the trade cycle is based on such an assumption [of elastic expectations].… The economic consequences of credit expansion are due to the fact that it distorts one of the terms of the speculators and investors calculation, namely interest rates. He who does not see through this, falls victim to an illusion; his plans turn out wrong because they were based on falsified data. Nothing but a perfect familiarity with economic theory and the careful scrutiny of current monetary and credit phenomena can save a man from being deceived and lured into malinvestments. [252]

These words by Mises are an important concession to Lachmann's skepticism and probably deserve more attention than they have received.

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Thank you to Liberty Matters, to those unnamed behind the scenes, and to my participating colleagues. I have enjoyed it and hope it has proved interesting and useful to our readers.

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Hans Eicholz is a Senior Fellow at Liberty Fund. Much of his work has been in the history of economic thought, looking initially at the influence of market ideas in the American founding period, but also extending up through the 19th century. His interest in Lachmann was sparked by the paralells in Lachmann's intellectual background and thought with that of the noted historian of American finance, banking and entrepreneurship, Fritz Redlich. He is currently working on a project to better understand and define the nature of the German Historical School of political economy andhas recently published "Ludwig M. Lachmann: Last Member of the German Historical School," *Journal of Contextual Economics* 137 (2017), 227-260 Duncker & Humblot, Berlin.

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Mario J. Rizzo, the director of the Foundations of the Market Economy Program in the department of economics and the co-director of the Classical Liberal Institute at New York University Law School, is a professor of economics at NYU. He the author (with Gerald O'Driscoll) of *Austrian Economics Re-Examined* (Routledge 2015) and the forthcoming (with Glen Whitman) *Puppets and Puppet Masters: Rationality, Behavioral Economics, and New Paternalism* from Cambridge University Press. His research lies at the intersection of economics, philosophy, psychology, and law.

Bill Tulloh is a cofounder and economist at Agoric. He was a market manager at smart-contract pioneer AMiX and was cofounder of the Agorics Project on markets and computation at George Mason University. He has published various articles at the intersection of economics and computer science. He has served as a product manager and director of business development for several software companies. His interest in the life and work of Ludwig Lachmann spans 25 years and stems from his role in assisting Don Lavoie in preparing a collection of Lachmann's writings: *Expectations and the Meaning of Institutions: Essays in Economics by Ludwig Lachmann* (Routledge, 1994).